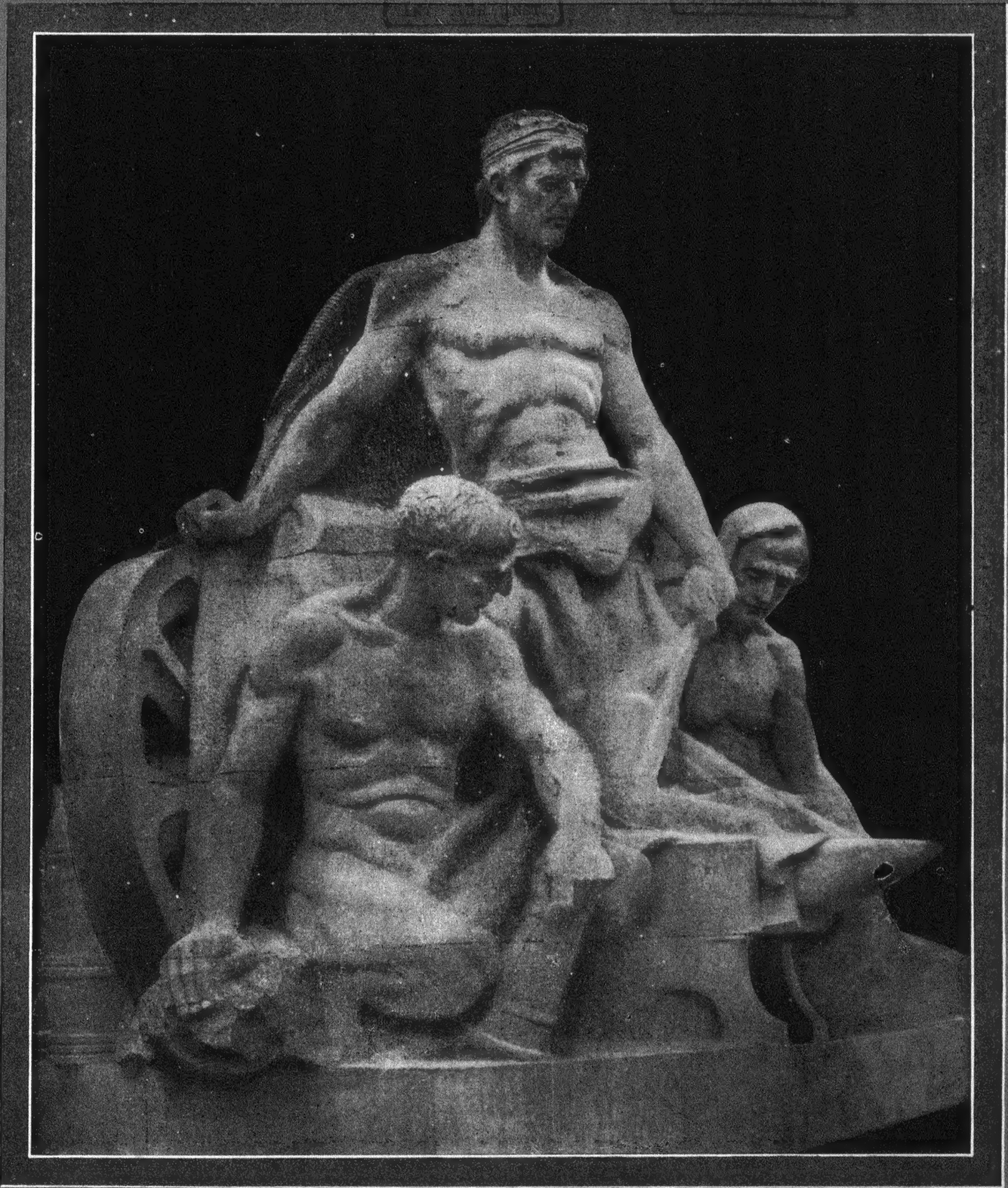


# THE GRAIN GROWERS' GUIDE

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INDUSTRY

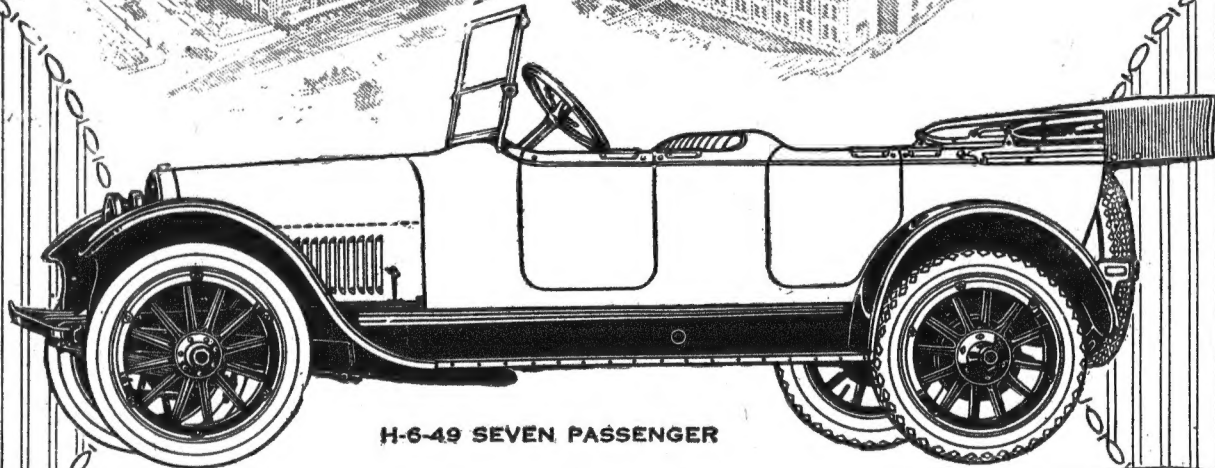
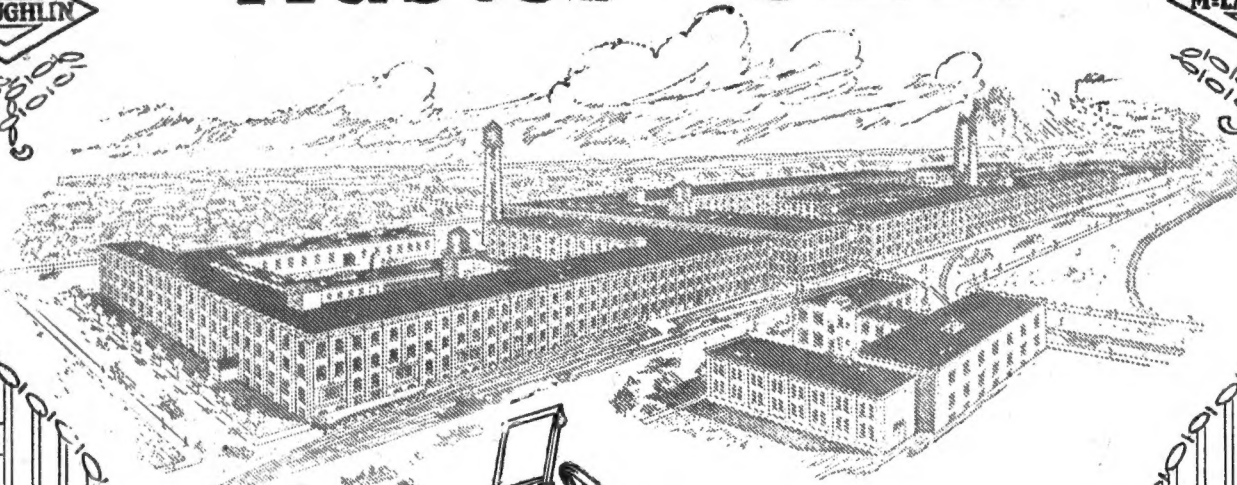
*Industrial Number*

*March 12, 1919*

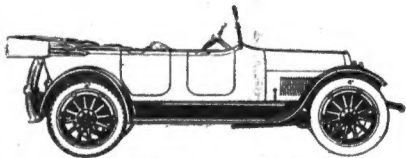


# McLAUGHLIN

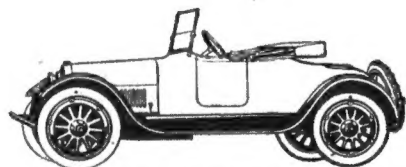
## Master Sixes



H-6-49 SEVEN PASSENGER



H-6-45 SPECIAL

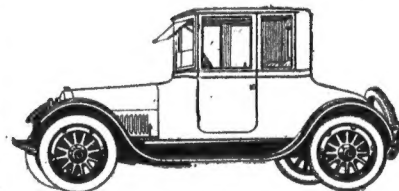


H-6-44 SPECIAL

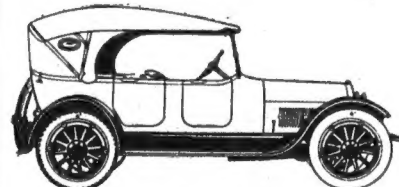
Master engineers combined their efforts with master artists to produce the McLaughlin Master Six. The result is a car worthy of the highest manufacturing ideals—a car appropriately called the Master Six.

CANADA'S STANDARD  
CAR

The McLAUGHLIN MOTOR  
CAR CO., Limited  
OSHAWA, ONTARIO



H-6-46



H-6-45 EXTRA SPECIAL

Call and See the New Models at  
the nearest McLaughlin  
Show Rooms



## Dominion Foundries and Steel Limited

Hamilton, Ontario.

Participation in the Production of Steel for Agricultural Purposes, and Its Influence Upon the Agricultural Situation Directly and Indirectly.

Two of the largest factors in influencing and upbuilding agriculture in Canada have been the railroads and the modern agricultural implements. Settlers of the North-West have followed immediately behind the railroads, and in many cases have actually preceded the building of the railroad and have had crops ready by the time the road was in operation. The marvelous speed with which settlers have moved in ahead of branch roads building in the spring, putting up temporary dwellings, and shelter for their stock, have broken the ground and planted their crops and had the grain reaped, thrashed and ready for shipment by the time the railroad reached them, is due to the fact that they were equipped with modern agricultural implements, enabling a man to cultivate and produce the largest acreage of grain with a minimum man power.

This production is 100 per cent. Canadian made. Such cannot be said of the railway material or the agricultural implements material, which goes to make possible the production of these crops. In the past large percentages of the money received from moving these crops, or for paying for agricultural implements has been sent out of the country to pay for railway and agricultural implements material; and besides this large loss in cash to the country we are piling up a balance of trade against us, that of recent years has caused an excessive rate of exchanges against Canada, all of which puts an indirect tax upon the whole country. The Railway Companies, due to the building and extensions of the locomotive car companies, steel mills and various other manufacturers which supply the railways, have been able from year to year to purchase a larger percentage of their supplies and equipment within Canada. In like manner the agricultural implements manufacturers and other factories producing material entering directly or indirectly into farm work, have, due to their enlargements and extensions, been steadily producing an increased percentage each year of the above named material in Canada.

This indirectly has had a tendency to expend an increasing amount of money in Canada, and to check to that extent the outflow of capital and the tax due to excessive exchange. It is entirely obvious that the more products and materials that can be produced in this country where they are used, will add in ex-

actly that proportion to the general wealth and prosperity of the country at large, and tend to balance business conditions and create a larger consuming population within our own borders.

We have now come to the time when it is necessary to produce within Canada more of the raw or semi-finished materials which enter into the making of agricultural implements, and particularly railroad materials and all other machinery and products which enter into modern agriculture. It has been necessary for the factories in this country to still import enormous quantities of steel castings, forgings, billets, plate and bars, to say nothing of pig iron and ore, which enters into the production of all machinery and equipment as raw or semi-finished material.

To meet the requirements of the various manufacturers of agricultural implements the Dominion Foundries and Steel Limited, of Hamilton, Ontario, which has already been a large supplier of the railways of various steel materials, have now established a plant for the production of special grades of steel which enter into the production of Plows, Harrows, Tractors and more or less all agricultural implements. During the progress of the war this firm successfully established rolling mills for the production of all grades of Plow steel, both what is known as solid Plow steel and soft centre Plow steel; also the high grade Harrow Discs, Coulter Discs and other miscellaneous steels which enter into the building of these implements, all of which is being successfully tried out.

The plant erected for this purpose is modern in every respect and is equipped to take care of a large tonnage of steel, all of which was formerly imported.

The Dominion Foundries and Steel Limited have also undertaken to equip their plant with electric furnaces in addition to the open hearth furnaces now in commission. The successful use of the electric furnace not only produces a high-grade of steel at a reasonable cost which is admirably suited for agricultural implements, but is also using the Hydro-Electric Power for melting this steel, to that extent avoiding the importation of coal.

This plant is admirably situated at Hamilton, in the heart of the manufacturing district.

Pig iron, scrap and other raw materials that enter into the making of steel are here converted into high grade steel ingots; these in turn are re-heated and rolled in the various rolling mills into billets for making forgings; or, they are rolled

into plates which are sheared up into various shapes suitable for Plows, Disc Harrows, etc.

Besides furnishing Discs, Harrows, Reaper and Mower steel, and the various sheet and plate steel which forms the most important part of agricultural implements, this plant produces a large tonnage of castings ranging from one pound in weight to forty tons, used particularly in railroad and steamship work, and by machinery manufacturers. This company also produces large forgings for steamships and locomotives, as well as railway car and locomotive axles.

The Dominion Foundries and Steel Limited, are now specializing in high carbon steel which are so largely entering into the composition of Tractors, Automobiles and Automobile Trucks.

The Dominion Foundries and Steel Limited, running at full capacity, employ about 2,000 men.

Their products enter directly or indirectly into almost every community and every manufacturing business.

It is not the intention of this article to go into the technicalities of the manufacturing process, nor to describe in detail the products. It is sufficient to say that their products form the basis of raw or semi-finished material for a large number of industries mentioned above, all of which material would otherwise be imported and to that extent swell the balance of trade against this country.

The Dominion Foundries and Steel Limited was founded in 1912, at the height of Canada's great industrial and agricultural expansion and has increased its capacity from about 100 tons of steel per day to about 700 tons of steel per day.

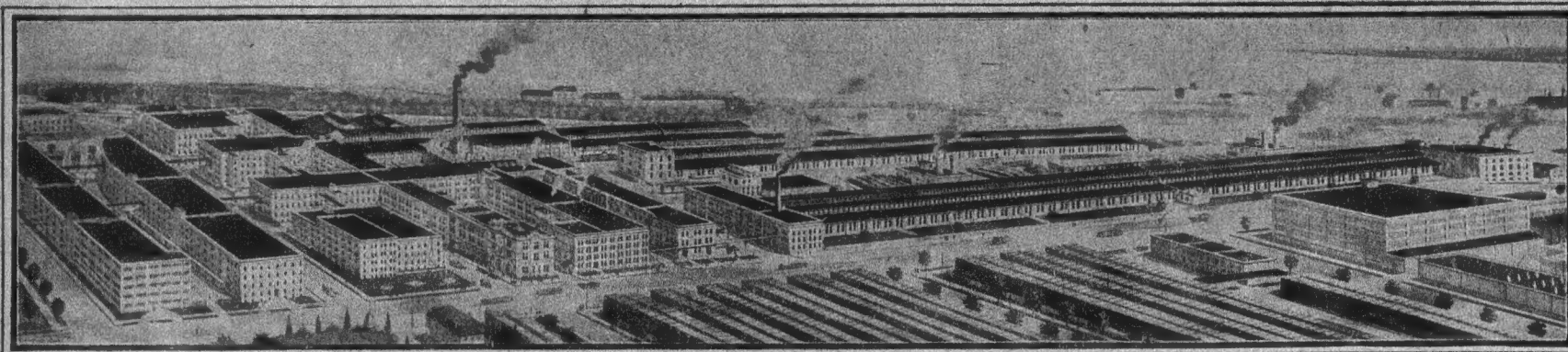
The plant is located on the Grand Trunk and Toronto, Hamilton and Buffalo Railroads, being advantageously situated as regards shipping facilities.

The property consists of about 30 acres of land and has modern steel buildings, comprising Open Hearth Furnaces, Foundry, Rolling Mill, Plate Mill, Axle Shop and Heavy Forge Shops; all of the equipment being of the most modern design throughout.

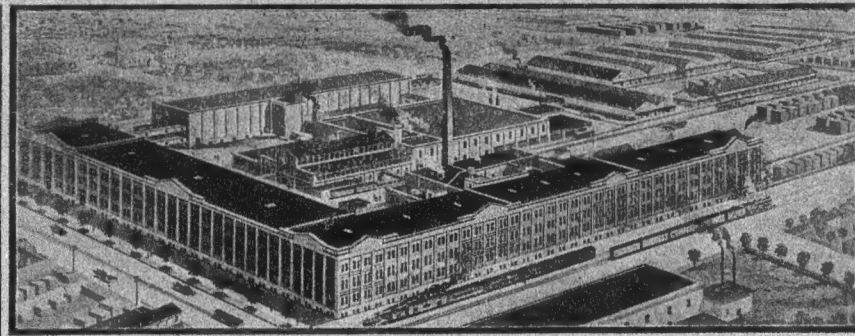
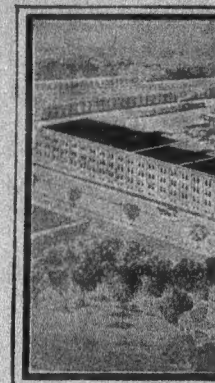
It is now recognized in all quarters that every effort must be made to build up, not only finished manufacturing enterprises in this country, but those enterprises which furnish raw material or semi-finished material which enters into the finished manufactured article. With plants of the above nature going into new lines, there is a field they cover that heretofore has been supplied outside the country, and it is the earnest desire of all concerned to keep this business inside the country and give every encouragement to these above-mentioned lines, in order to make the country as a whole, more independent, commercially and financially, than it is today.



# Massey-Harris Factories



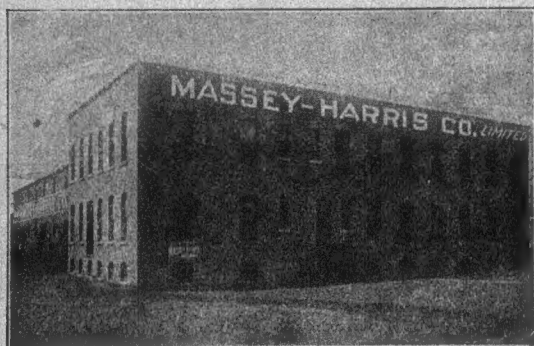
Toronto Factory.

Woodstock  
(Wagon)  
Factory.

Brantford Factory.

Brantford  
(Plow)  
Factory.

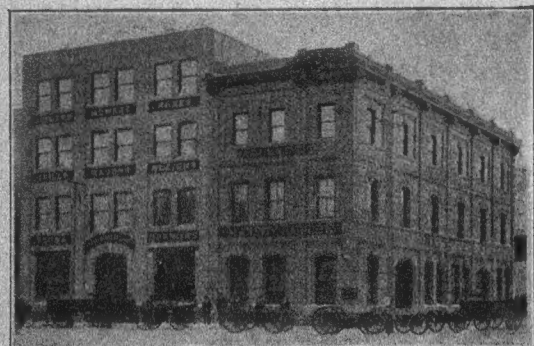
Head Offices, Toronto, Ont.



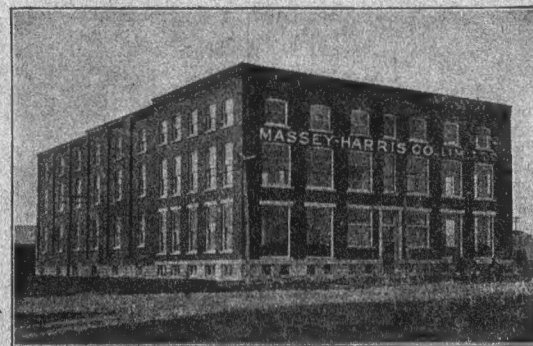
Montreal, Que.



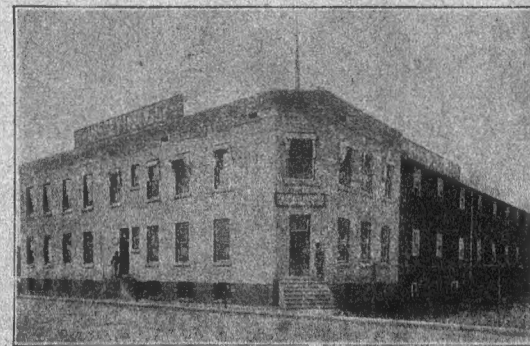
Moncton, N.B.



Winnipeg, Man.



Swift Current, Sask.



Regina, Sask.

## Quality

Quality in farm implements is what has brought the Massey-Harris Organization to be the largest of its kind in the British Empire.

Beginning away back in 1847—72 years ago—the few Implements turned out then, were known for their uniformly high Quality, and to-day in the five large Factories now kept busy turning out all kinds of Implements—Quality is the one thing most sought after. The reason given by most farmers as to why they keep on buying Massey-Harris Implements is—"They are so uniformly good and reliable."

The materials which enter into the Implements bearing the name Massey-Harris are the best that can be procured, and the workmanship is thorough. Every Machine is tested, and must come up to the Standard before it is allowed to leave the Factory.

The name Massey-Harris on Farm Implements is, therefore, the farmers' best guarantee.

As with Quality  
Branch Office  
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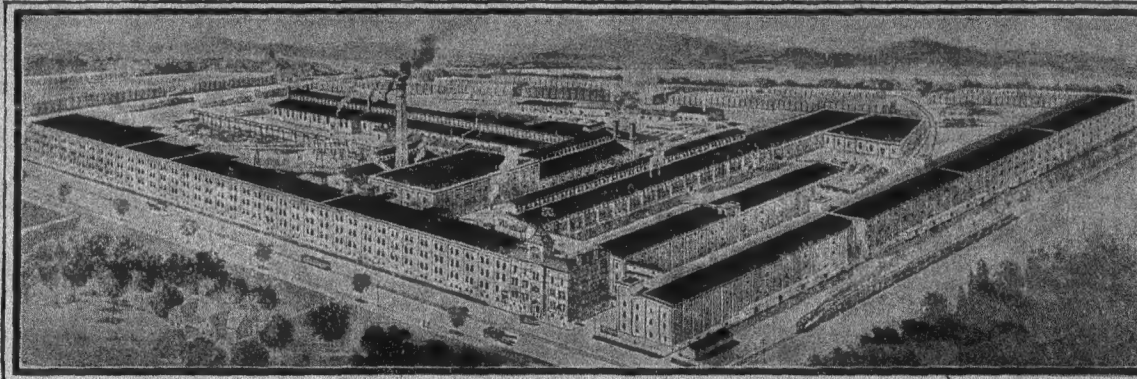
Grain Binders.  
Reapers.  
Corn Harvesters.  
Mowers.  
Rakes.  
Teddies,  
Side Delivery Ra  
Hay Loaders.  
Cultivators.  
Fertilizer Drills.



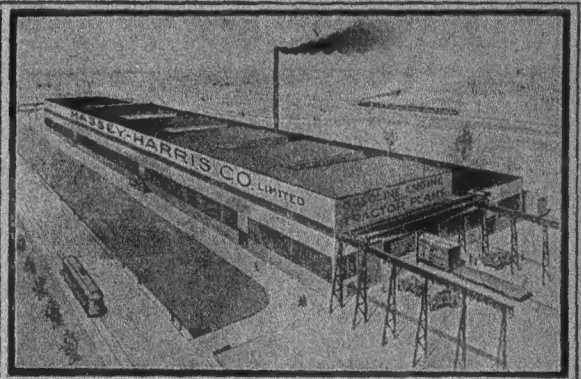


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# and Canadian Branches



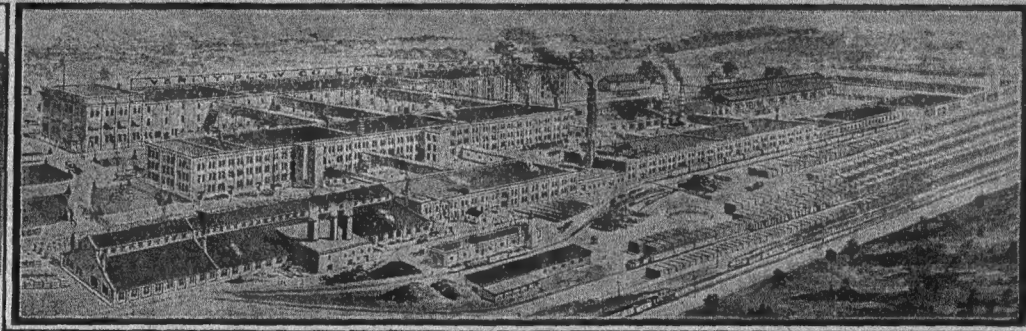
Brantford Factory.



Weston Factory.



Brantford (Plow) Factory



## Service

As with Quality, so also in Service, Massey-Harris excels.

Branch Offices in all large cities, and local Agents in almost every town and village, assure you of the very best of service, whether it be the setting-up and putting into operation a new Machine, or the supplying of Repair Parts just at the time you need them, and saving you from disastrous delays during busy seasons.

The Line of Implements Manufactured is complete, enabling the farmer to equip throughout with Implements, all of which bear the name Massey-Harris and are covered with the one guarantee of Quality and Service.

### THE LINE COMPRISES:

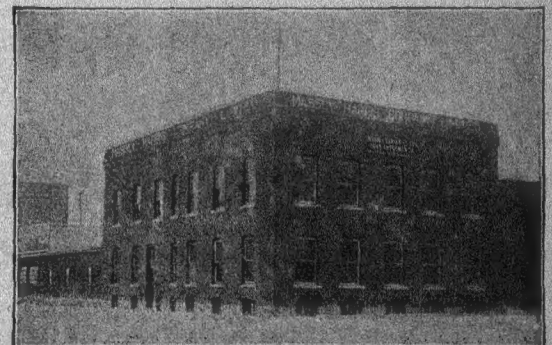
Grain Binders.  
Reapers.  
Corn Harvesters.  
Mowers.  
Rakes.  
Teddars.  
Side Delivery Rakes.  
Hay Loaders.  
Cultivators.  
Fertilizer Drills.

Hoe, Shoe and Disc Drills.  
Fertilizer Sowers.  
Disc Harrows.  
Drag Harrows.  
Feed Cutters.  
Pulpers.  
Grinders.  
Ensilage Cutters.  
Manure Spreaders.

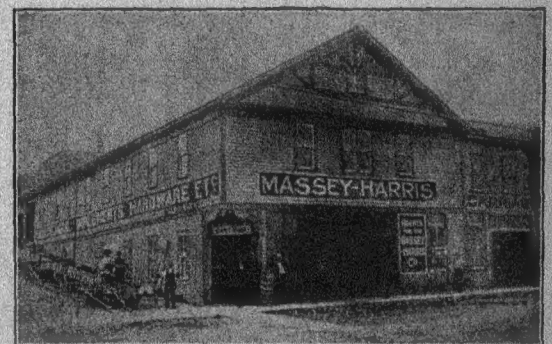
Cream Separators.  
Plows.  
Scufflers.  
Land Rollers.  
Packers.  
Wagons.  
Sleighs.  
Gasoline Engines.  
Saw Outfits.  
Tractors, Etc.



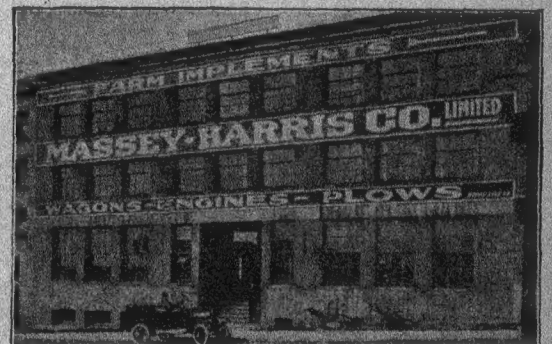
Calgary, Alberta.



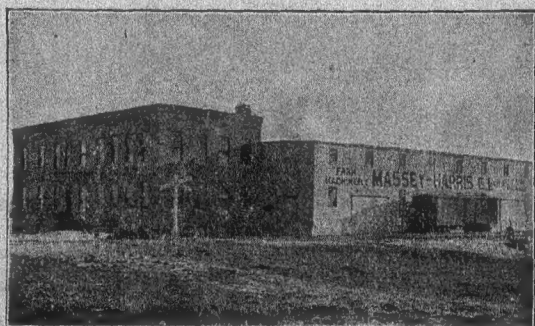
Edmonton, Alberta.



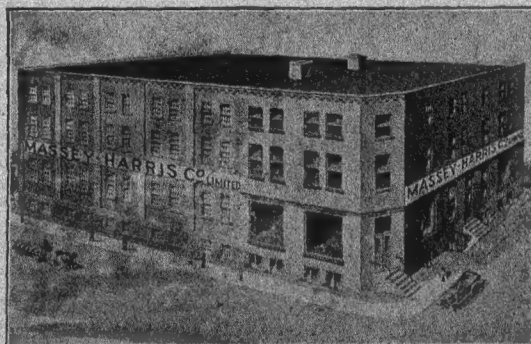
Kamloops, B.C.



Vancouver, B.C.



Saskatoon, Sask.



Yorkton, Sask.

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of its kind

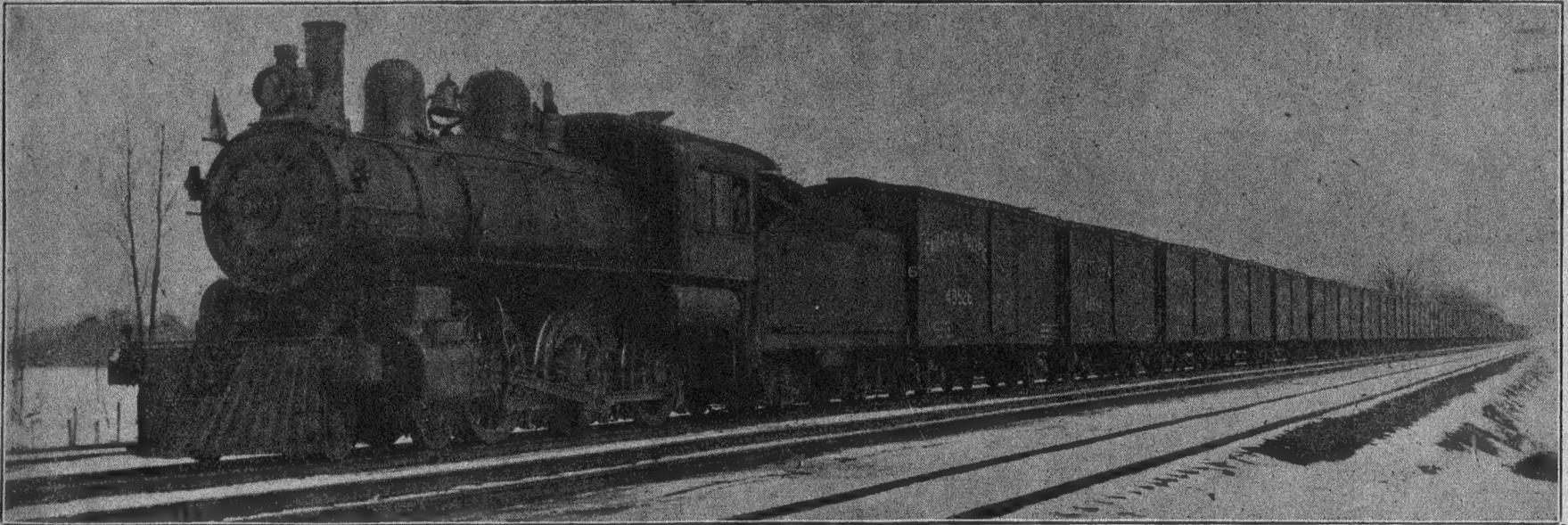
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Linking East and West—A C.P.R. Freight Train.

## A STEP TOWARDS MUTUAL UNDERSTANDING

By W. B. LANIGAN, Freight Traffic Manager, Canadian Pacific Railway.

**T**HE Grain Growers' Guide is to be congratulated on taking the initiative, through its Industrial Number, in bringing about a better understanding between the representatives of Canada's agricultural and industrial life. If the reconstruction program that Canada has outlined is to advance our national development, the objective can only be reached by all interests working together, and not by pulling in opposite directions.



W. B. Lanigan, Freight Traffic Mgr., C.P.R.

As one whose occupation was for many years in the industrial cities of Eastern Canada, and who subsequently enjoyed the acquaintance of a very large number of our Western farmers, I do not think that I am far out in saying that grave misapprehensions of industrial and agricultural problems—mutual recriminations—and needless friction would not exist on better acquaintance. No one who lived in the Canadian North-west and witnessed the early struggles of the Western farmers in organizing for the protection of their interests, and was honored with the personal friendship of their leaders, but will admit that Canada has no better citizens, and the Empire no more loyal subjects. The fact that these men, with neither business training nor experience, have been able to build up such an immense co-operative institution as that represented by the United Grain Growers and the Saskatchewan Co-operative Association for the marketing of their produce, and the purchase and distribution of their farm requirements, is striking testimony of the energy and intelligence and the sound financial sense of the North-west farmer.

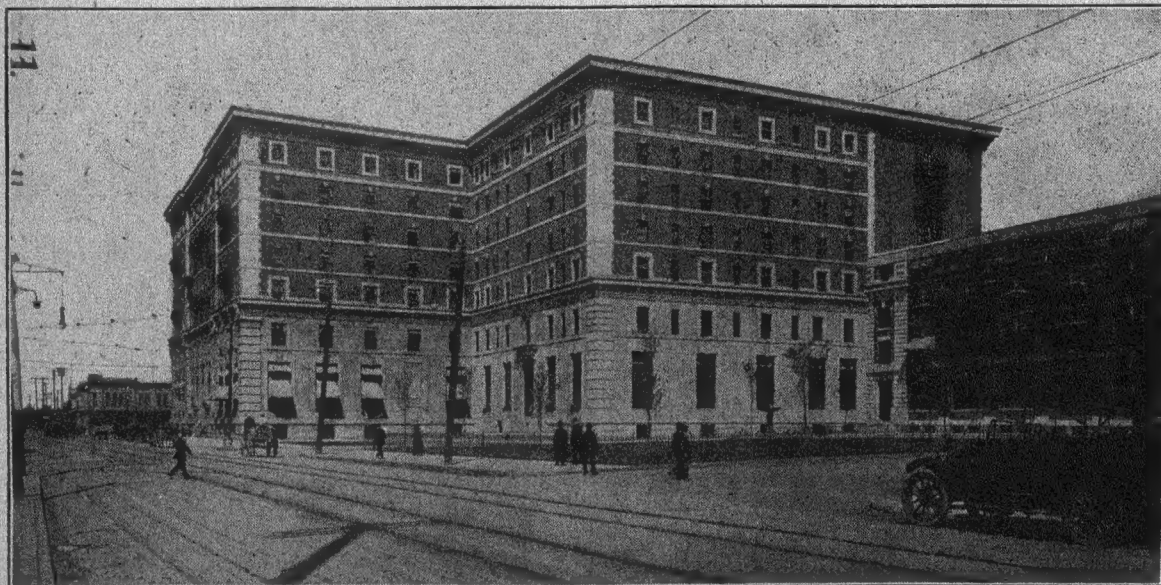
It requires no little skill, and a great deal of good judgment, to operate not only interior, but terminal elevators, to market the millions of bushels of grain produced by the Western farms, and besides this, to operate what is practically one of the largest wholesale distributing businesses in the Canadian West. On the other hand, those who were acquainted with the Canadian manufacturer in the pioneer days of Canadian industrial development learned much of the grave difficulties, the failures, and the handicaps that the Canadian manufacturer has had to surmount, and of those perilous periods he passed through that threatened to

engulf the results of years of stringent economy, of intelligent and hard-working effort, and of financial stringency. There is, therefore, every reason why there should be mutual understanding and good feeling between the two factors that have been largely responsible for Canada's past development.

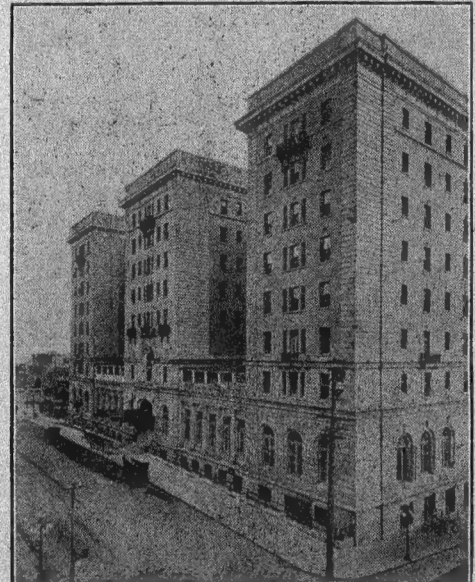
Industrial opportunity and agricultural expansion must go together if Canada is to take her place amongst the prosperous nations of the world. It would be perhaps surprising to our farmer friends to learn that a census of our successful industrial captains shows that a large percentage of these captains was recruited originally from agricultural life. Farmers' sons are not always born to follow the plow, and indeed, it would be difficult for the average farmer to find agricultural opportunity for all of his boys, or to force a boy, with a natural gift for business, or an inborn genius for industrial life, to follow his father's footsteps. It would be a direct and irretrievable loss to the nation if such a boy's talents were buried by an uncongenial occupation. These natural gifts, for the lack of industrial opportunity, could not be developed to their highest and greatest service. The laurels of inventive genius of industrial achievement, more often than not, crown the head of the boy brought up on the farm.

Canada's future lies in the development of her agricultural wealth, and that development cannot progress without the incentive of profit to those who settle on and exploit our vast and practically untouched prairies. Canada's industrial possibilities cannot attain their full measure of progress without this development.

Much has been said of a home market for the farmer's produce. Little emphasis has been laid on the manufacturer's farm market for his output. Both are equally important. There is a third factor—that of transportation, which must serve these interests, both efficiently and intelligently. All three factors must have the incentive if profitable enterprise is to succeed, and to this end all three must work intelligently together. For a great many years, the Canadian Pacific Railway has pursued the policy of keeping in close touch with the farming interests along its line; of frequent conferences with the farmers' associations as to matters affecting agricultural development. These conferences have resulted in mutual benefit, understanding and good feeling. I would earnestly recommend the same policy to the manufacturing and agricultural interests. Until the Western farmers organized their associations, conferences and exchange of opinions were impossible. Now, the great farmers' annual gatherings afford an opportunity to the industrial, transportation, and agricultural interests to meet, exchange experiences, and know each other better. Personally, I have found our Western farmers a most reasonable and fair-minded class, and I have no doubt that the Canadian manufacturing interests will have the same experience. The savings of our people are the result of their industry, economy, and self-sacrifice, and the natural and proper desire to provide for old age and those dependent upon us. A large percentage of these savings is invested in the securities of industrial and transportation enterprises. Outside of Victory Bonds, a new field, there is little else that promises a field or investment for savings assuring an income provision for the years when earning powers wane or cease. Let us be careful, therefore, that by ill-considered action we do not destroy the results of years of legitimate enterprise—wipe out the savings of a lifetime of economy, and remove the incentive for thrift by depriving it of a legitimate field of investment. Let us rather work together to build up a greater nation, where agriculture, transportation, and industry will co-operate in national development—where adequate rewards will be insured for the good old-fashioned virtues of economy, sacrifice and hard work. One thing is certain, Canada's reconstruction can only be a success through mutual understanding and joint effort.



C.P.R. Royal Alexandra Hotel at Winnipeg.



C.P.R. Palliser Hotel at Calgary.





Apple Orchard Near Kelowna, Okanagan Valley.



Nelson, B.C., Capital of the Kootenays.

## THE LAKE DISTRICT OF SOUTHERN BRITISH COLUMBIA

**H**OW many, even of those who live in the West, realize that in the five hundred miles between the prairies of Western Canada and the Pacific Coast lies the most wonderful summer playground in the world—a world of snow-clad peaks and valleys gay with flowers, a world of forest, lake and river, the haunt of game and of countless fish? Up in the mountains there are trails for sure-footed ponies, in the valleys and along the lake shores are automobile roads, linking the settlements of fruit-growers, who in due season load the table with cherry, apple, pear, peach and melon. Motor-boat and canoe make distances seem short in the lakes themselves, and bring the fisherman to the creeks where trout are waiting to fill the basket. Here the boy has trees to climb and clear pools to swim in—a thousand things to do that are impossible upon the prairies.

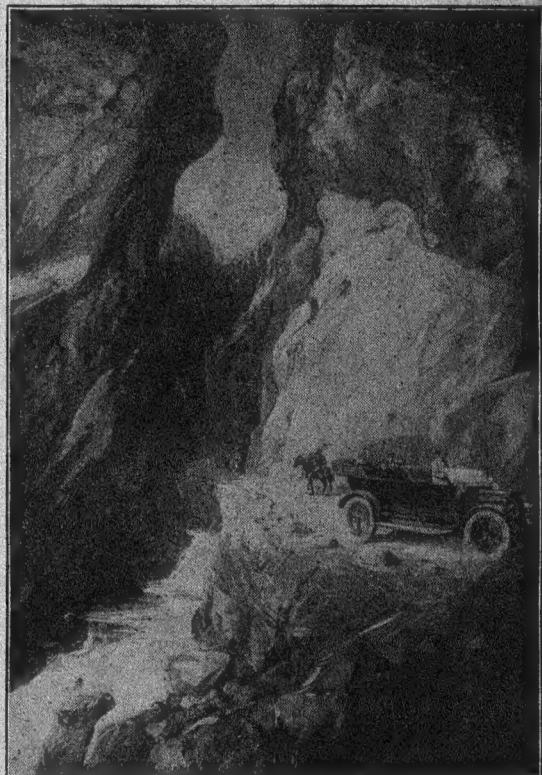
So excellent are the rail and lake steamer connections of the Canadian Pacific that this great playground is wonderfully accessible. And it is easy to find accommodation for every purse—you can camp, there are (owing to the war) vacant orchards to rent, there are moderate-priced hotels, there are occasional house boats. Three weeks or a month in this country will mean a new lease of life for many a prairie dweller.

The mountain system of Canada divides into the Rockies proper, the Selkirk Range, and some smaller ranges. Between each is a valley, with slopes descending through green shores to a beautiful expanse of water. Between the Rockies and the Purcell Range is the Columbia Valley and Lake Windermere; between the Purcells, which are a branch of the Selkirks, and the Selkirks themselves, is Kootenay Lake; between the Selkirks and the Gold Range are the Arrow Lakes; and between the Gold, Coast and Cascade Ranges is Okanagan Lake. Two great rivers, in a series of curious windings, link together the first three—the famous Columbia River, which rising from the spring-fed Lake Windermere, flows first north, and then, turning south, enters the Arrow Lakes and bears away their waters to the Pacific Ocean; and the scarcely less-famous Kootenay, which, draining the southern end of the Columbia Valley, makes an excursion into the United States before it turns back into Canada, and, entering Kootenay Lake at the south, finds its way from the western end of that lake into the Arrow Lakes.

A still more notable agency links together, not only these three, but also the Okanagan Lake, with another valley, and finally the sea. This link is the railway. The Kettle Valley branch of the Canadian Pacific Railway, with its tributaries, now connects Nelson, the chief city of the southern lake region, with Vancouver, touching en route the shores of Kootenay, Arrow and Okanagan Lakes. At the same time, entrance into some of these valleys can advantageously be gained from the north from the main line of the Canadian Pacific.

These picturesque valleys are given over variously to fruit-growing, lumbering and mining, industries which are now providing the sustenance of an increasingly large settlement. But the present consideration is the fitness of this region as a holiday resort. Surrounded by mountains, with warm, equable climate, under clear blue skies, rivaling those of California, the lakes provide a hundred centres ideally suited for summer vacations, long and short, easy and strenuous. The altitudes are moderate, ranging from 2,607 feet above sea-level at Lake Windermere, to 1,125 at Okanagan. With so much water, every kind of aquatic sport is available. There is sailing and boating across wide stretches or into pine-clad bays, swimming in calm, warm water, so clear that the sandy lake bottom, shelving in places gradually out from the shore for the careful beginner to keep his foothold, is visible a long way from the water's edge. There is delightful picnicking or camping on the tree-fringed shore, first-class trout fishing for the angler—even salmon. At some points there is mountain climbing, at others, in season, big game shooting. One valley provides good golf; all of them offer good automobilism through beautiful scenery.

During the summer months the weather is warm and sunny—is not this suggested by the fact that in some of these valleys fruit such as peaches and grapes are grown? The fruit-farming industry, one of the principal sources of revenue of the inhabitants of these happy valleys, will, in fact, provide the visitor with much interest; and from the hospitable British Columbians he is sure of a hearty welcome and a cordial delight at meeting with those from outside the mountains.



Sinclair Canyon in the Upper Columbia Valley. Windermere District, B.C.



C.P.R. British Columbia Lakes Steamer, S.S. Okanagan.



# 65 YEARS DEVOTED TO THE MAKING OF STOVES AND FURNACES

How a right aim and steadfastness of purpose became the foundation of a  
Canadian Company known from Coast to Coast

When he started, in his tiny foundry away back in 1854, little did John Clare think that in hundreds of thousands of Canadian homes, in 1919, the products which bear his name would be lightening labor and supplying warmth and comfort to those homes. The founder's three sons went in as lads and learned the business of making stoves from the ground up, and in 1881 took over the business under the name of Clare Bros. & Company.

Stoves formed the one Clare product up to that time, but 1882 saw furnaces added to their line. Later came steam and hot water boilers and their necessary equipment, making a complete Clare line of heating devices.



The Western Warehouse of the Company, built 1911, on May Street, Winnipeg, having excellent truckage facilities.

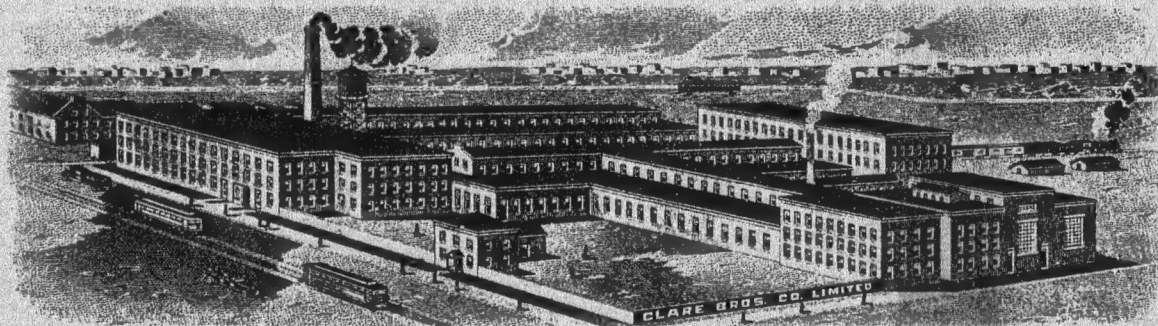
Perhaps one of the most notable points is the fact that the Company has remained "Clare" throughout, and though some of the Clares left their own foundry to work for themselves or others, they all came back bringing with them a wider experience. After 65 years this is still true, and the Company is still in the Clare family. The business in Western Canada is managed by one of the third generation of Clares. Mr. H. J. Clare, as Vice-President and Managing Director of Clare Bros. Western Limited, Winnipeg, is a man whose aim in life is to uphold the Clare reputation for honest workmanship and dollar for dollar value.

## LATE MODELS OF CLARE PRODUCTS SHOW GREAT ADVANCE IN METHODS

From the beginning of the Company and through all the years since there has been a constant planning and working to leave behind the old-style stoves, but in doing so there was no let-up to the improvements made in styles already being used. Even today, in spite of the great strides made in ranges, the Clare low-oven products stand supreme. It was not until 1915 that the one range which was to take Canada by storm came. But now, the new Lighter Day, High-Oven, Coal or Wood Range is without question the greatest improvement in a hundred years in stove making.

In 1882, Clare Bros. & Co. commenced making furnaces. At first these were not the success they should have been owing to lack of proper methods of installation, which made them leak gas and dust. In 1884, experiments were tried with fused joints,

now so well known as an exclusive Hecla Furnace Feature, which completely overcame this defect. And from the first patented Clare improvement the Company has gone on adding feature after feature, until now the Hecla stands easily as the standard of economical warm-air heating.



A bird's-eye view of the Clare plant at Preston, Ont., on the site of the original foundry.

In 1909, hot water and steam boilers, known as the Imperial and Adanac boilers, were put on the market by the Company, and have proved a great success from the first. To go with these the Company has patented the Hydro-Thermic system of radiation—as far superior to cast-iron radiators as is the Lighter Day Range to the old-style cook stove. The Company is now planning a Pipeless Furnace that bids fair to equal the success of their other lines.

The Company invites correspondence on any or all its lines and backs every one of them. There may also be some dealers throughout Western Canada who would like to communicate with us regarding our dealer proposition.

# CLARE BROS. WESTERN LIMITED

WINNIPEG - MANITOBA



### A WORD TO THE WISE

The editors hope you enjoy reading The Guide. This year will see many important improvements made. We can promise our old subscribers many new, unusual and interesting features, a constant bettering of our service.

During the next few years Canada must solve the trying problems that will have resulted from the great war. The equitable solution of the reconstruction difficulties will determine the status of western agriculture—as to whether our prairies will be dotted with prosperous farms or the industry stifled by placing upon it an unequal portion of the vast burden of debt that has been created. Every farmer should keep posted—The Guide should be a weekly visitor in every farm home during this period.

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## THE GRAIN GROWERS' GUIDE

"Equal Rights to All and Special Privileges to None."  
A Weekly Journal for Progressive Farmers.

The Guide is absolutely owned and controlled by the organized farmers—entirely independent and not one dollar of political, capitalistic, or special interest money is invested in it.



Published under the auspices and employed as the official organ of the Manitoba Grain Growers' Association, the Saskatchewan Grain Growers' Association and the United Farmers of Alberta.

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The Industrial Number of The Grain Growers' Guide contains a wealth of information on the chief industries of Canada, other than agriculture, which, it is hoped, will prove valuable to farmer-students of the economic activities of the Dominion. It is not the object here to outline the purpose of this special number. That is done in the editorial pages of this issue. It has been deemed advisable, however, to say something in The Guide Post regarding the contributors of the articles in the following pages; to introduce them, as it were, to Guide readers. Each of these contributors is an authority on the industry of which he writes. Most of them are editors of industrial journals and in a position, therefore, to give a bird's-eye view of the industries dealt with, showing the important place which each occupies in the industrial life of Canada. The others are equally qualified, by their close connection with the industries of which they write, to deal with them authoritatively.

First, a word about the cover illustration. This is from a photograph of the group representing industry which, along with other groups representing agriculture, art, literature, etc., will adorn the new Manitoba parliament buildings. The photograph is by F. A. Purdy, who carved the figures. The original models are on exhibition in the Art Gallery, Industrial Bureau, Winnipeg.

The leading feature, Canada's War Industries, is from the pen of M. E. Nichols, Director of Public Information, Ottawa; Reginald E. Hore, who contributes the article on Mining, is editor of the Canadian Mining Journal; The Fishing Industry is handled by Frederick William Wallace, author of Blue Water, A Tale of the Deep Sea Fishermen, The Shack Locker, and other sea tales. Captain Wallace, who also took the photos from which his article is illustrated, is now editor of the Canadian Fisherman; A. S. Ardley, who writes on The Lumber Industry of Canada, has a thorough knowledge of the great lumber business in all of its many aspects; the contribution on Pulp and Paper, is by J. N. Stephenson, editor of the Pulp and Paper Magazine of Canada; George E. Short B.A., industrial editor of the Journal of Commerce, discusses the Leather Industry and its growing importance; under the title Canadian Flour Mills, W. Sanford

Evans, secretary of the Millers Committee, reviews the flour milling industry of Canada; Lloyd Moore, industrial editor of The Globe, in Manufacturing Agricultural Machinery, deals with an industry of particular interest to farmers; while W. G. Dauncey, associate editor of Iron and Steel of Canada, and a prominent consulting engineer of Montreal, covers the building of steel ships in Canada, in his article Shipbuilding and Shipping.

Of no less interest and importance are the shorter features on Canadian industries. The effect of war and of peace on the machinery used in the great factories is outlined interestingly by A. R. Kennedy, editor of Canadian Machinery; an article on the textile industry is contributed by the editor of the Textile Journal; and another on the food situation by the editor of The Canadian Grocer. J. L. Rutledge; Dr. Alfred Stansfield, editor of Iron and Steel of Canada, writes on iron and steel manufactures; clay products manufacturing is covered by G. C. Keith, secretary of the Clay Products Association of Canada; the automotive industry by W. F. Prendergast, who is connected with the official organ of the automobile manufacturers; R. E. Jamieson, who contributes the article on the rubber industry is a permanent official of one of the great rubber manufacturing establishments of Montreal; the article on the manufacture of chemicals is contributed by T. H. Wardleworth, of the explosives branch of the Imperial Munitions Board; petroleum and its products was written for an eastern financial paper by S. R. Parsons, president of the Canadian Manufacturers' Association, who consented to its re-publication; G. M. Edwards, secretary of the Association of Paint and Oil Manufacturers, is the author of the article on that industry; A. E. Uren, editor of the Furniture Journal, and C. S. Richardson, editor of the Cigar and Tobacco Journal, are authors of the articles on the manufacture of furniture and tobacco, respectively.

It will be seen by this array of contributors that no pains have been spared to make the Industrial Number of The Grain Growers' Guide a reliable source of information to the farmers of western Canada on the manufacturing industries of Canada.

## ASK THE GUIDE

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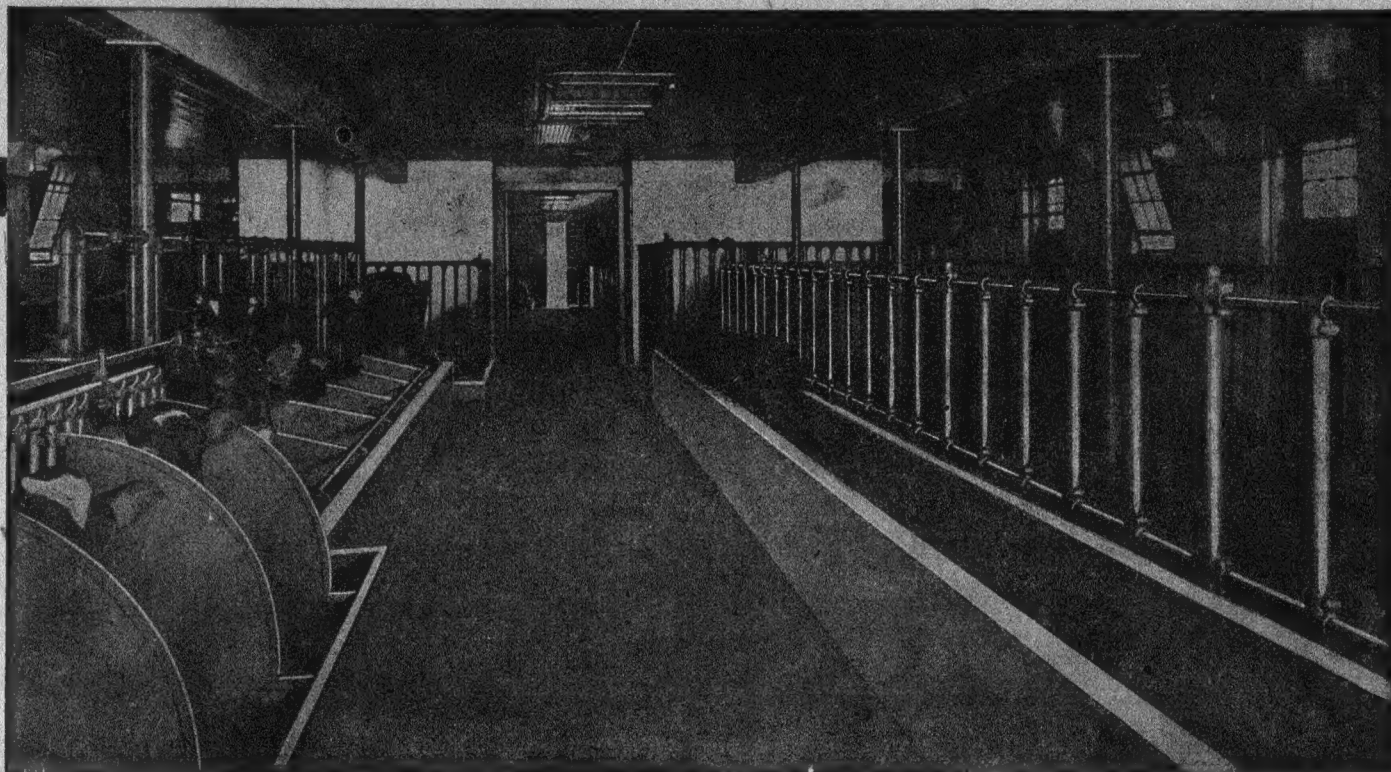
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# The Grain Growers' Guide

Winnipeg, Wednesday, March 12, 1919

## Our Industrial Number

This week's issue of The Guide is something entirely new, so far as we know, in the history of Canadian journalism. It is an attempt to give our readers a bird's-eye view of the most important industries of Canada, and we have called it an Industrial Number. The Guide readers are very large purchasers of the products of Canadian industries, but there is very little information regarding these industries ever published in the farm press. Furthermore, the East has always felt that the western farmers have no appreciation of the industrial development of Canada. This led us to consider devoting one week's issue of The Guide to descriptive articles on the industries of the nation. Canada has made great progress in industrial development, and that development is bound to continue in order to serve the needs of the people of this country. No people in Canada welcome legitimate industrial development more heartily than the western farmers, despite all that is said to the contrary by many eastern interests. The natural resources of this country are not surpassed by those of any other country in the world, and Canadian enterprise should be equal to the best.

We do not believe there has ever been gathered together in one paper, a review of Canadian industries equal to those appearing in this week's issue of The Guide. We believe it will prove of great interest to our readers. As it is something entirely new we shall hope to have our readers' views regarding it, and if it is appreciated it might be possible to devote, perhaps, one issue out of the 52 in each year to a sketch of the growth and development of industrial Canada.

Few of our readers will ever be able to make a personal visit through all the industries described in this issue, and it is advisable that those engaged in farming—Canada's leading industry—should have a general idea, at any rate, of the other industries of the Dominion. The articles contributed to this issue are written by men in close touch with the industries upon which they write, and it has been specially provided that no propaganda material appears in the articles.

When it was decided to publish this Industrial Number manufacturers were given an opportunity to publish announcements in the same issue devoted to their particular factories and industries, and a number of them have taken advantage of it, as they regarded it as a good opportunity to put the facts of their business before their best customers, the western farmers. These announcements by individual industries are all in the form of advertisements appearing in this issue, and each advertiser has been free to make whatever remarks he desired regarding his own industry.

## The Wheat Situation

The letter from Norman Lambert, secretary of the Canadian Council of Agriculture, which appears on page 64 of this issue, is of prime importance to every man who grows wheat. Mr. Lambert writes from Paris, and while overseas he has been in touch with the men who are handling the European food problem. The information he has gathered points to two probabilities. First, there is a strong movement towards de-control—that is, against governmental control and fixed prices. Britain and the other European nations feel that by allowing the law of supply and demand to operate freely they

will be able to buy their wheat at a lower price than could be secured by any method of control.

The second probability is that there is every likelihood of a big surplus of wheat in the world as soon as this year's harvests are taken off, though there is the uncertainty of climatic conditions and the requirements of Russia. The figures have been published previously in The Guide on production and consumption throughout the world in normal times. The United States Congress, before adjourning last week, voted the huge sum of \$1,000,000,000 to assist in marketing, and to meet expected losses in maintaining the price of \$2.26 per bushel, which was guaranteed by act of Congress to American farmers for every bushel of wheat they produce in 1919. The American government has decided to pay the price guaranteed to the farmers and to pay from the public treasury losses that will be sustained in marketing the surplus, which may amount to 600,000,000 bushels, or even more in case of a heavy crop. What the price may be on the European market when our next harvest is taken off is purely a matter of speculation.

## The Farmers' New Friend

For some time The Winnipeg Telegram has indulged in vicious attacks upon the United Grain Growers Limited, which it has accused of robbing the farmers, and the same journal has also been attacking The Grain Growers' Guide. In attacking the organized farmers, The Telegram is true to its past record, and has little regard for either truth or decency. The Telegram charges J. R. Murray, of the United Grain Growers Limited, with appearing before the Board of Grain Commissioners, asking for changes in the terminal elevator tariffs, so that the farmers' company could take heavier toll off the farmers. The official record of the meeting, however, shows this to be an absolute falsehood. The fact is, that the Board of Grain Commissioners, in September, last, without consulting either the organized farmers or the grain trade, put out an order reducing the allowance for wastage in cleaning at the terminals from one per cent. of the gross weight of a car to one per cent. of the gross dockage. "It was a stupid ruling, considered from any standpoint, and no member of the board has ever even suggested that grain could be cleaned for this reduced allowance. Even the Dominion government elevator, operated by the Grain Commissioners themselves, ignored the new ruling for the first two months of the year. Mr. Murray pointed out to the board the stupidity of the ruling, but did not ask for any change, stating that the organized farmers would be taking the question up at their meetings later on before the terminal elevator tariffs were fixed for another year, because, once fixed, these tariffs cannot be raised until the grain year is ended. This is one false attack by The Telegram exploded.

On the question of overages at the terminal elevators, The Winnipeg Telegram, and also W. J. Christie, a well-known Winnipeg financial man, who was at one time a director of The Winnipeg Telegram, have been conducting a campaign against the United Grain Growers, and have accused the company of plundering the farmers. The fact that five other terminal elevators (including the Dominion government terminal) had larger gross overages and higher percentages than the farmers' company is not mentioned by these two apostles of virtue. They direct their attack against the farmers' company.

Why? Neither of them state that the Board of Grain Commissioners has ordered all overages above one-quarter of one per cent. to be held for confiscation by legislation. It would not help their case to tell these facts. Neither of them have explained either that the United Grain Growers have expressed their willingness to have the government confiscate all the overages if, at the same time, the government will give them a guarantee against shortages. Neither of them have stated that the United Grain Growers have expressed the opinion that if the government audit shows terminal earnings too high, that the tariff charges should be reduced. It does not suit either The Telegram or Mr. Christie, to give an honest statement of the case.

Mr. Christie recently joined a local Grain Growers' association in Manitoba, and attended the district Grain Growers' convention at Portage la Prairie, on February 28. Before an audience of 350 grain growers he was given permission to indulge freely in his attacks upon the United Grain Growers, which he did most viciously. He was replied to by Mr. Murray, of the United Grain Growers, and at the conclusion of the debate a vote was taken on Mr. Christie's resolution and there were only four votes in favor of it. The result of the Portage meeting should show both Mr. Christie and The Winnipeg Telegram what the farmers of Manitoba think of their action. A report of the meeting is found in the Manitoba page of The Guide this week.

Nearly two weeks ago, Mr. Murray sent a letter to The Winnipeg Telegram replying to their attacks upon himself, but up to the present time (March 7) The Telegram has not published Mr. Murray's letter. Apparently The Telegram does not believe in publishing the truth. The whole question of terminal tariffs and overages is long, involved and technical. The United Grain Growers have published a pamphlet giving the facts on the question and will be glad to send a copy to any person requesting it.

During the past ten years, The Winnipeg Telegram has held the journalistic record for mean and untruthful attacks upon either the Grain Growers' Company, the Grain Growers' Association, or The Grain Growers' Guide. It has not hesitated to stoop to the dirtiest tactics in journalism. Twice in recent years The Telegram has come out under "new management." But whether under "new management" or under "old management" the leopard has not changed its spots. Why does The Telegram attack the organized farmers? If The Telegram will give its readers a few facts about its history, its ownership and its financial support, we believe that "the nigger in the wood pile" will be apparent. Who are Messrs. Davidson and Smith, who are announced as owners of The Telegram? What other newspapers do they own, and how did they make their money? Who is putting up the money to meet the losses sustained in publishing The Telegram? Will the present "new management" of The Telegram be good enough to give its readers the history of the "old management," and let them know who were the "old management"? Perhaps the "new management" will explain whether or not the "old management" ever returned to the Manitoba government the money which it took out of the public treasury by illegitimate methods.

Will The Telegram also give its readers the name of the new political Moses for whom it is preparing the way to the



Promised Land? If The Telegram will truthfully answer these questions we will venture it will make no more attacks upon the organized farmers. When this information is fully given there are other facts of its unsavory career which its readers would also like to know.

### Hudson Bay Railway

The western legislatures are voicing western opinion in urging the Dominion government for the speedy completion of the Hudson Bay Railway. The construction of this new outlet to Europe for our western products has been repeatedly urged upon the Dominion government by the organized farmers. All investigations go to show that the Hudson Bay route is thoroughly feasible and practicable and will, reduce freight rates on farm products shipped to the European market, and will also reduce freight rates on manufactured goods brought from Britain for consumption on the prairies.

### To Stop Land Speculation

The land settlement scheme discussed by the provincial premiers and the Dominion government, at Ottawa, last November, has just been made available for publication. It follows the plan advocated in The Guide and is in accord with the Farmers' Platform. The general plan, as drafted by Hon. J. A. Calder, minister of immigration and colonization, provides for co-operation between the Dominion and provincial authorities. It would have special application to the prairie provinces where there are millions of acres of the choicest land lying idle alongside the railways, held out of use by speculators.

The proposed scheme provides that provincial laws should be enacted, compelling every owner of idle land to fix a price at which he would sell for cash. This price would remain fixed for a period of years (or permanently) subject only to the increase due to taxes and interest. This price would also be the assessment value, so that if the price were placed too high the owner would be penalized by taxes, and if fixed too low to escape taxation, it would speedily be purchased by some person for farming purposes. The net result would be to secure an equitable, fixed selling price which would at once put an end to speculation in idle land which has been one of the greatest curses of the prairies.

The price of the land thus having been fixed at a fair value, the scheme provides that the Dominion and the provinces co-operate to secure good farmer-immigrants to occupy the land. The provincial governments are to purchase the land and the Dominion lend its credit, so that settlers may repay

upon long terms at low rates of interest. The Dominion government is to provide for securing settlers from other countries, particularly no doubt the United States, and the provincial governments to take care of them after they arrive.

This, in brief, is the outline of the most comprehensive land-settlement and immigration scheme yet proposed by any Canadian government. It should, if adopted, result in bringing in a high class of settlers and putting our idle acres to work as soon as desirable. The Saskatchewan legislature only considered the scheme from the standpoint of the returned soldier, and not of general settlement. It conferred upon the Saskatchewan government full power to adopt this plan, or any other deemed advisable to provide land for the soldier. The plans of the Alberta and Manitoba governments regarding the scheme are not yet fully disclosed. This general scheme is the only one yet proposed that will induce settlers to come, and afford them a good opportunity to settle the idle land, and yet, at the same time, prevent a recurrence of the wild orgy of speculation and boom that has swept over the West several times in the past.

### To Prohibit Grain Gambling

W. R. Wood, M.P.P., secretary of the Manitoba Grain Growers' Association, introduced into the Manitoba legislature last week, a bill designed to prevent gambling on the Winnipeg Grain Exchange. Mr. Wood pointed out that he was not aiming to hamper the legitimate business of the exchange, nor trading in futures, except where it was purely a gambling transaction. The bill provided heavy penalties for making contracts for the future delivery of grain where the actual delivery of the grain was not intended in good faith. This is the crux of the grain gambling problem. The gamblers buy what they do not need and never expect to receive, and they sell what they do not have and never did have. The whole purpose of the gambling is to step in between the producer and the consumer and get something for nothing. In past years this gambling in grain has been indulged in by grain dealers, business men, professional men and farmers. It has a most demoralizing effect upon the gambler, and in addition, most of them are heavy losers. It is a practice that should be prohibited.

Mr. Wood's bill was pronounced by Hon. A. B. Hudson, acting attorney general, to be beyond the power of the provincial legislature and only possible of enactment by the Dominion parliament. Under the circumstances, Mr. Wood withdrew his bill, but made it quite clear that the fight for such legislation had only begun and would

be carried to Ottawa, where, sometime, a democratic parliament would prohibit the nefarious practice of gambling in food products.

The Saskatchewan legislature and the Manitoba legislature have each unanimously passed resolutions asking that the protective tariff be reduced. The resolutions in each case were very much the same as the tariff planks in the Farmers' Platform. There was no division of opinion in either legislature, both Liberals and Conservatives realizing that the West must have relief from the burden of the tariff. They expressed what is the unanimous opinion of Western Canada.

A report appears in the daily press, headed as follows:—

"Toronto News reported to be protectionist organ," which intimates that The News is coming out under "new management" as the manufacturers' organ. We thought it had been trying its best in the past to be the manufacturers' organ. This "new management" stunt is a great dodge for covering the past.

The Canadian Reconstruction Association claims to be a national organization, working for the benefit of the nation. We will venture that this same association, which is spending money by the barrel, has not devoted 15 cents in an honest endeavor to find out how the tariff affects the agricultural industry.

The protectionists are evidently becoming worried, because they are beginning to suggest that a tariff commission should be appointed to investigate the present tariff, and recommend changes to make a "scientific tariff." We should be interested to know how many representatives of the organized farmers they would like to have appointed on that tariff commission.

In the big fight on the tariff question now being waged, the greatest need is to get facts in the hands of the farmers, and the next great need is to secure money to pay for the expenses of the conventions and for the election campaign when it comes. The Guide has mailed to each local secretary in the three prairie provinces a scheme whereby The Guide will help towards both of these important ends. This plan should be considered by every local association. A copy of this plan will be mailed to any member of a local association who will ask us for it.



BEFORE ELECTION

AND

AFTER ELECTION

AS IT HAS BEEN IN THE PAST



# Canadian War Industries

*A Resume of the Munitions Work Turned Out Under  
the Direction of the Imperial Munitions  
Board—By M. E. Nichols*

**W**HEN the great war commenced no Canadian manufacturer had ever made a shell, a cartridge-case or a fuse. In the third year of the war Canada was producing 55 per cent. of the shrapnel shells; 42 per cent. of the 4.5 shells; 27 per cent. of the 6-inch; 15 per cent. of the 8-inch and 16 per cent. of the 9.2-inch shells used by all the British armies. When the armistice was declared, there had been spent in Canada in the manufacture of munitions, principally in shells, well over a \$1,000,000,000.

And what had Canada to show for this colossal expenditure? She had manufactured and despatched to the battlefields of Europe, 65,343,647 shells; 29,638,126 fuses; 16,174,073 fuse parts; 48,627,673 cartridge cases; 35,386,488 percussion primers; 13,285,000 exploder containers; and 6,412,115 shell and adapter forgings. A mere novice in the manufacture of explosives and chemicals before the war, this country shipped 41,754,950 pounds of T.N.T.; 28,542,157 pounds of cordite and over 41,000,000 pounds of other chemicals and explosives. **Over a Billion-and-a-Quarter**

In addition to the expenditure on shells and other component parts, there was also spent by the Imperial Munitions Board, in behalf of the British government, a vast amount for metals and compounds, explosives and chemicals, lumber and airplanes making the total outlay of British money in the country for the machinery of war, approximately \$1,200,000,000, or nearly the equivalent of the total amount of domestic loans raised by the Dominion of Canada during the war. For building ships for the British government, in Canadian yards, there was spent a further sum of \$65,000,000. The sums spent annually in these great war enterprises in Canada, were two-and-one-half times greater than the expenditures made in a normal year by the government of Canada. "Who would have supposed," asked a leading member of the British government in a public address, delivered in London, in the second year of the war, "that Canada should have sent to the front, or have in process of training to go to the front, more men than we sent altogether to South Africa in a struggle in which we thought we had tested the strength of the Empire? Or who would have dreamed that Canada would have produced more munitions than any country in the world, except Germany, prior to the war?"

## Operations Were Nation-Wide

This, in broad outline, indicates the scope of the manufacture of munitions in Canada; an industry which engaged several hundred Canadian plants employed on war contracts, gave employment to at least 250,000 workers and required the services of 50,000 people for handling and transporting stores. Steel was purchased wherever it could be obtained. It was shipped 1,000, 1,500 and 2,000 miles to have it forged. From the forging plant it was shipped

back again 500 to 600 miles or forwarded 2,000 miles to machining plants. Other component parts were purchased from manufacturers as far south as Florida. They were sent to remote points in order that every Canadian manufacturer engaged in munitions contracts might sustain delivery of finished shells.

The manufacture of munitions was widely distributed. It spread over the whole of Canada, with the exception of Prince Edward Island, which is exclusively agricultural, and even invaded the Island of Newfoundland. From the first factory in the east to the last factory on the Pacific coast was a journey of 4,500 miles.

How one success lead to another, how each year Canadian industry, under the spur of the stern necessities of war and the driving power of Sir Joseph Flavelle, chairman of the Imperial Munitions Board, put forth its utmost energies, is told in the following statement of yearly production:—

## Value of Munitions Exported From Canada

1914	.....\$	28,164
1915	.....	57,213,688
1916	.....	296,505,257
1917	.....	388,213,553
1918	.....	260,711,761
		<b>\$1,002,672,413</b>

## All Kinds of Shells

Canada made nearly a dozen varieties of shells—from 13-pounders to 9.2 inches in calibre. The quantities of the different sized shells, produced were as follows:—

18-Pr. Shrapnel (empty)	.....	8,664,920
18-Pr. Shrapnel F.A.	.....	24,939,798
18-Pr. High Explosives	.....	5,629,411

ployment to over 2,000 workers and attained a capacity for turning out 350 machines and spares per month. A number of flying boats were also constructed at this plant for the United States navy. Commencing operations in January, 1917, Canadian Airplanes Limited, manufactured 2,050 complete airplanes, representing a value of \$6,700,000.

## Chemicals and Explosives

The plant of the British Chemical Company Limited, located at Trenton, Ont., was erected by the Imperial Munitions Board, at a cost of \$5,000,000. It produced acids, gun-cotton, T.N.T. and propellants. The total output of T.N.T. and nitrocellulose powder to November 30, 1918, was 14,000,000 pounds and 20,000,000 pounds respectively. For the six months, ending September 30, 1918, this plant produced 25 per cent. of the total output of nitric acid from all plants in the British Empire, while ten per cent. of the total production of T.N.T. was manufactured by the British Chemical Company during the same period.

On the plant of the British Cordite Company Limited, located at Nobel, Ontario, \$3,500,000 had been expended. It was erected by the Canadian Explosives Company, of Montreal, for the board, and operated by that company, on behalf of the board, for the purpose of producing cordite, of

which 21,450,000 pounds had been manufactured up to November 30, 1918.

The factory of the British Explosives Limited, located at Renfrew, Ontario, was leased and operated by the board for the manufacture of nitrocellulose powder. Sixteen-million pounds had been produced before the close of the war.

On the plant of the British Acetones Toronto Limited, the board expended \$550,000. Acetone and butyl alcohol were produced in large quantities. British Acetones has, in point of fact, been responsible for practically the whole of the acetone production within the British Empire. The total quantity of acetone manufactured was approximately 5,700,000 pounds.

## Shells and Fuses

The British Forgings Limited, was established in Toronto, at a cost of \$2,500,000, for the production of ingots and shell forgings, from the steel scrap accumulation, collected from hundreds of munitions' factories all over Canada. It was the largest electric steel plant in the world, and capable of turning out 6,000 tons of ingots monthly. Operations commenced in July, 1917. Since that time 2,790,000 six-inch shell forgings have been produced, in addition to 106,200 9.2-inch shell forgings.

The huge factory of the British Munitions Limited, located at Verdun, was completed in June, 1916, for the purpose of loading and assembling British No. 80 Mark VIII time and percussion fuses. In August, 1917, the average output of this plant had reached 35,000 fuses per day, the greatest number of fuses assembled and loaded in any one day.

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Munition Work Proceeding Under the Direction of the Imperial Munitions Board. Upper left: Inspecting each of the 52 component parts of the fuse. Upper right: Small parts assembly department, British munitions plant, Verdun, Montreal. Middle: A former bridge-making factory converted into a munitions plant. Lower left: Adjusting the rings of fuses in the British Munitions Company's plant. Lower right: Finished 4.5 Howitzer shells ready for filling and fusing.

4.5-inch High Explosives	.....	12,571,344
60-Pr. High Explosives	.....	1,104,276
6-inch High Explosives	.....	10,519,219
8-inch High Explosives	.....	753,517
9.2-inch High Explosives	.....	782,355
15-Pr. Shrapnel	.....	299,258
13-Pr. Shrapnel	.....	79,550

Of metals and compounds, Canada produced 43,077,923 pounds of steel bars; 35,412,413 pounds of zinc; 1,792,000 pounds of nickel and over 27,000,000 pounds of other metals and compounds.

The manufacture of airplanes, which furnished one of the most impressive chapters in the work of the Imperial Munitions Board, necessitated calls for immense quantities of lumber. There were used for this purpose 16,289,227 feet of spruce and 6,801,324 feet of fir. Lumber for other purposes was required and used to the extent of 11,530,315 feet of Douglas fir; 10,360,566 feet of pine and 8,345,675 feet of spruce.

## Manufacture of Airplanes

In addition to placing contracts with factories throughout the country, the Imperial Munitions Board developed national plants for the construction of airplanes, for the production of steel ingots and forgings for the loading of fuses, for the production of powder and high explosives and for the manufacture of sulphuric and acetic acids and acetone. These national plants, paid for by British gold, but organized and operated by Canadian energy and brains, played a really stupendous part in the overthrow of the Hun, and deserve more than a passing reference.

Canadian Airplanes Limited, Toronto, erected for the manufacture of airplanes for training purposes in Canada, became one of the most successful of its kind in the world. The capital expenditure was \$900,000. It gave em-



# The Mining Industry

*One of Canada's Greatest Basic Industries—Total Output in 1918 was \$220,000,000—By Reginald E. Hore*

production in Nova Scotia fallen off? Why have the great coal deposits of Western Alberta not been more generally utilized in the prairie provinces?

## Enlistment of Miners

The coal shortage affects almost everyone, and has helped to direct attention to the fact that we must have coal in war as in peace. When the calls for volunteers came in 1914 and 1915, the enlistment from our coal-mining centres was exceptionally heavy. In Nova Scotia there was a rapid decline in number of miners available, and it has been, and still is, impossible to obtain men with the necessary experience to replace those who went to Belgium and France and fought so valiantly there. In Alberta the situation was quite different. There the mines are equipped and managed for a much larger output than the market demanded. The encouragement by the railways of the shipment of anthracite from the far eastern Pennsylvania fields made it difficult for Western coal producers to compete in their natural market. When the anthracite supply was cut off there was soon an increase in output of Western coal. In Ontario there was more real danger of shortage, for here we are dependent almost entirely on imports from the United States. It is probable that we will continue to be so dependent. To balance such im-

between 9,000,000 and 10,000,000 tons of coal could be produced annually. This is a safe estimate as during four or five months of each year 80 per cent. of the mines are idle owing to the lack of orders. Even with the wide publicity that has been given the question of fuel during the last 12 months, very few of the domestic coal mines in the province have worked to more than 50 per cent. of their capacity during the months of September, October and November. The same conditions exist in the steam-coal mines, although in a lesser degree, and a number of the operators in these mines are becoming seriously alarmed regarding the outlook for market during the next few months. There appears to be no reason whatever why any coal should be imported from the United States into these provinces, unless in a few isolated cases where it would appear that small amounts of anthracite coal were essential.

As pointed out by F. W. Gray, in the Canadian Mining Journal, it cannot be claimed that the future of the coal industry in Nova Scotia is encouraging. Because of the operation of adverse factors the coal operators find themselves confronted with a labor shortage, war-time wages, a permanently increased getting cost, and collieries that are either approaching exhaustion or are incapable of producing the pre-

the coal output used in steel manufacture is now so great as to have made the production of coal for domestic uses a secondary consideration. So long as the steel trade continues profitable this condition of affairs may continue, but it will eventually become plain that the coal industry itself is the basis of industrial prosperity, and the coal industry cannot be regarded as stable unless, in addition to supplying the steel industry with the required fuel, it can also provide the railway, shipping, factory and domestic requirements of the accustomed distribution area of Nova Scotian bituminous coal. At the present time this is not possible, and unless the coal operators of Nova Scotia are resigned to going out of business entirely they must speedily take steps to increase the coal production, for only by increased production can the cost of extraction and marketing be reduced to figures that will permit of sales being made in competition with the United States fuel, just so soon as the present coal shortage passes away.

## 1918 Production \$220,000,000

The total value of the mineral production in Canada during 1918 was probably not less than \$220,000,000. The total value of the production in 1917 was \$189,646,821. The Department of Mines estimates the production of coal during 1918 at about 15,180,000 short tons, as compared with a production of 14,046,759 short tons during 1917. The production of the more important metals during 1918 is estimated as follows: Gold, \$14,750,000 in value; silver, 20,800,000 ounces; copper, 117,000,000 pounds; nickel, 191,500,000 pounds; zinc, 36,000,000 pounds; pig iron, 1,182,000 short tons; steel ingots and castings, 1,910,000 short tons. The production of these metals in 1917 was: Gold, \$15,372,992 in value; silver, 22,221,276 ounces; copper, 109,227,332 pounds; nickel, 82,330,280 pounds; zinc, 29,668,764 pounds; lead, 32,576,281 pounds; pig iron, 1,170,480 short tons; steel ingots and castings, 1,745,734 short tons.

Our large output of iron and steel is not so satisfactory as the statistical tables indicate, for about 90 per cent. of this iron was recovered from the treatment of foreign ore. The great iron and steel works of Nova Scotia draw their ore from Newfoundland. Most of the iron ore that goes into the furnaces in Central Canada comes from the Lake Superior states. We have deposits in Canada that will yield large quantities of iron ore, but it cannot be said that progress in iron ore mining is satisfactory. The problem will be easily solved if rich, large deposits are found, but to develop those that are known, in competition with the richer and more easily worked deposits of the Lake Superior states, is an enterprise that has not proven very alluring to capital.

## Rich Nickel Deposits

In the case of nickel, we are in a stronger position than in any other country. The great mining industry of the Sudbury district is an asset that is hardly appreciated by Canadians. It is well known that the two producing companies are making a large profit in their operations, but there seems to be little recognition of the importance of the industry to the community. It is well to remember that the men employed in the mines and smelting works of the Sudbury district number about 5,000 men. The wages paid annually total over \$5,000,000. Machinery and supplies purchased by

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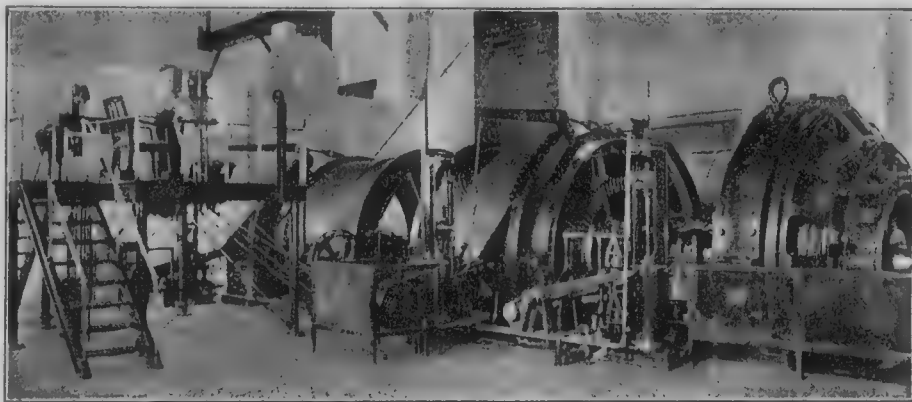


Diamond Drilling in a Nickel Mine.

**N**EXT to agriculture, mining is Canada's greatest basic industry. Like the farmers, our miners and metallurgists are engaged in the production of essentials. In parts of Canada, mining and recovering the valuable constituents of ores is the chief occupation of our citizens. The farmer cannot get along without the products of the mines any more than can the miner without food. He is therefore interested in the development of our mineral resources, even though he may take little active part in that development. It is safe to assume that readers of this journal wish to know whether progress in development of our mineral resources is satisfactory, whether our ore deposits are being used to good advantage, and whether we may expect Canada to be self-sustaining so far as mine products are concerned. It is permitted to me to put before you some facts concerning our mining industry and the men who are engaged in it. I hope that what you read here may give you the impression that mining in Canada is now a well-established, essential industry, that it has made rapid progress and promises to expand greatly, that the major operations are conducted by men skilled in applied science and finance, and that the product of our mines is a direct contribution to our national wealth.

As a first test as to the value of our mining industry one may well ask: "Did it help us to win the war?" That it did so will be evident when we consider that we contributed coal, iron, steel, nickel, copper, lead, zinc, aluminum, molybdenite, arsenic, chromite, asbestos, graphite, magnesite and pyrites. Our coal helped to produce power for manufacture of munitions and to propel ships that carried men and munitions across the Atlantic. Our iron and steel were made into millions of shells as well as into countless forms of war articles. Our nickel was a very important factor during the war, for we produce four-fifths of the world's nickel, which is so greatly in demand for the manufacture of nickel-steel and nickel-chromium-steel. In a smaller way the other minerals and metals mentioned did their part.

It is well to enquire as to the source of these materials and to consider whether we did as well as we should have done in the great emergency. The matter of coal supply is important to all our citizens. Why is there a shortage? Why has



An Electric Hoist Which Raises 5,000 Tons of Ore Every 16 Hours. This, the largest electric hoist in Canada, is located at the Creighton Nickel Mine, Sudbury District, Ontario.

ports we should endeavor to export more coal from our Eastern and Western coal fields. In all parts of the country we should give more attention to the development of water power for power purposes.

## Prospects in Alberta and Nova Scotia

Alberta could produce much more coal than it does. As pointed out by Mr. Stirling, chief inspector of mines of Alberta, in the Canadian Mining Journal, if the mines were worked steadily during the whole year without increasing the present labor employed, and with the present amount of development work done,

war outputs because of the arrested condition of their underground development, brought about by a labor shortage extending now over a full three years. The actual cost of mining coal in Nova Scotia exceeds greatly the maximum selling prices allowed by the United States Fuel Administration at the bituminous mines in that country. In some instances it costs twice as much to defray the bare outlay on wages and materials as the maximum pit-mouth selling prices just referred to.

The position of the Nova Scotian coal industry has latterly been obscured by the dominance of the steel industry, because the percentage of



Creighton Mine of the International Nickel Company of Canada. Surface plant and buildings. In the foreground is the lumber yard, then the shops, and in the background the Rock House and Head Frame.





J. R. Booth,  
The Veteran Lumber King of  
Ottawa.

**N**ATURE'S most valuable, profitable and wonderful building material is lumber, and the most outstanding questions at the present time are its commercial value, the prospective cut during 1919 and the expansion of the export trade. In the manufacturing and business world the speculative is always interesting. The results of the past four years' operations are known; the present is a sort of mark-time period or mile post in the reconstruction journey and the conversion of affairs in the forest products arena from a war basis to a peace footing. It is to the future that the great lumber industry is looking and wondering how matters will shape,



Front View of Victoria Mills, Fredericton, N.B.

whether there will be an unprecedented domestic and foreign demand or comparative stagnation for several months, accompanied by a gradual recession in prices.

It is easy to prognosticate and make our own individual wishes, whether producer or consumer, sponsors for certain lines of thought. Previous to the outbreak of European hostilities it is estimated about 80 per cent. of the wood products of Canada went directly or indirectly into building operations, while the remainder was diverted to other uses. The war changed all this and reversed the proportions, the minor quantity entering into ordinary constructional work, while 80 per cent. of Canadian lumber found its way into governmental channels and numerous war requisites, the details of which worked out advantageously to the trade as a whole.

It is to the readjustment and realignment of the industry that attention is now directed. Unusual and abnormal conditions had to be faced during the world-wide combat, and now that it is all over other new phases in the trade present themselves for adjustment and solution. In some centres the view is expressed that building will not become very active in 1919, nor will any large structural undertakings be carried out until values fall. There must be some incentive, it is contended, to go ahead with new dwellings, warehouses and factories, although it is admitted by all that general repairs and renovations cannot be much longer deferred.

#### Big Increase in Production Costs

A comprehensive survey of the situation reveals no substantial foundation on which to rest the expectation of lower prices. Just why such a feeling prevails in the minds of some it is difficult to determine. It is not sup-

ported by any economic, productive or market viewpoint. With the great majority of Canadian lumber manufacturers and wholesalers stocks are lower today than ever, the cut during the coming season will not be more than 75 per cent. of that of a year ago, while the material now in mill yards or at distributing centres cannot be replaced at a less advance than five to ten per cent. In all merchandising propositions replacement values must be taken into consideration. What is the present situation?

The cost of logging, driving, towing, sawing, piling, shipping and distributing has ascended from 10 to 20 per cent. during the past year. There is no evidence that there will be any immediate alteration in a single factor of the industry from the felling of the tree itself to the final delivery of the finished product. Everything is high and the trend is upwards instead of downwards. While labor is more plentiful and more efficient than it was, the release of men from the munition plants, the militia and forestry battalions, came too late to be of much avail during the cutting season 1918-1919. Wages in camps have steadily increased since the outbreak of the war, and during the past few months there was an advance of 15 per cent. In the eastern provinces as high as \$70 and \$75 per month and board was the ruling figure for the average lumberjack. Owing to the heavy outlay for all supplies for the bush the most economically conducted lumber companies today find that a man's "keep" is from 90 cents to \$1.10 a day. It has taken on the average three men to do the same amount of work that two performed before the war drained the industry of its active and most experienced woodsmen.

#### Unfavorable Conditions of Last Year

Many other handicaps had to be overcome. The winter was unusually cold last year and the snow deep, the sudden spring season saw very low water in many streams and driving expenses were very high. During the summer months there were frequent demands for more wages and these actions had to be met whether or not the figure obtained for the finished product justified the disbursement. The vital problem was to obtain men at any price. Skilled help, such as filers, setters, doggers, sawyers and others remained at their posts, but in the rank and file of

the labor army there was much restlessness and indifference manifested. In fact, so great was the migration that manufacturers possessing the saving sense of humor were heard to remark that they had "two gangs at their mills during the summer—one going and the other coming."

Operations of plants were abbreviated in 1918 owing to a decreased cut of logs, the shortage of labor, and later by the outbreak of the influenza epidemic, which at some points completely demoralized milling and logging activities. This combination of circumstances contributed materially toward reducing the total output of the season, while there was also a conservative attitude adopted by most of the large manufacturers who did not want to be caught with excessive stocks on hand and the war likely to terminate suddenly. In all problems of doubt and difficulty the middle course is the safest one to pursue, and this policy was characteristic of the shrewdest lumbermen, and even of those who under ordinary circumstances are disposed "to take a chance."

#### No Prospect of Lower Prices

Casting a horoscope over the future and surveying the industry from every angle, there does not appear any justification for lower prices. The writer holds no brief to defend the manufacturer or bolster up values, but from thorough inquiry and an extended study of the general situation, the impartial observer is forced to the inevitable conclusion that no cheap lumber is in sight. Present values of all stocks, both east and west, are holding firm, and those wholesalers who have several millions of feet on their hands are not worrying about the immediate disposition of their merchandise. They know that the lumber is worth every dollar they put into it and is bound to augment unless all omens fail. With the big export trade in which Canada will largely share, the rebuilding of the devastated countries of Europe, the aggressive house construction campaign in great Britain and the anticipated building revival at home, the future is being faced with both confidence and assurance. The regulations which governed and hampered the trade in the old country have been relaxed, and the number of enquiries already received from overseas with respect to what Canada can supply and has to



Plant of a Shingle Manufacturing Company at Port Moody, B.C.



The Logging Trail.  
A scene in the Lumber Woods  
of Northern Ontario.

offer are of the most encouraging character.

Practically all the lumberyards in the motherland are drained dry, and the committee recently appointed by the minister of reconstruction in Great Britain declares that 100,000 standards a month of softwood will be needed during this year for rebuilding purposes, and that 500,000 new houses are necessary to meet the requirements of the repatriated populace. This virtually means 200,000,000 feet a month and, providing adequate shipping facilities are forthcoming, an enormous quantity of white pine, spruce, hemlock and B.C. fir will find a satisfactory outlet. Owing to the heroic part played by Canada in the war and the loyalty and sacrifice



Little Current Lumber Co's Mills, Little Current.

of her sons in the supreme struggle for democracy and civilization, this country commands greater admiration and national prestige than ever in the heart of the Empire. The recent announcement that the British timber controller had placed orders for a billion feet of Canadian wood products through the Canadian Trade Mission in London is but an index of the splendid development that is awaiting the export of Canadian forest offerings. The West will probably supply about 400,000,000 feet of the huge consignment, while the remainder will be looked after by the other provinces of the Dominion. From the Maritime provinces and eastern Quebec will go spruce, from western Quebec and Ontario white pine and hemlock, and from British Columbia fir and spruce.

The movement of stocks across the sea will have the effect of strengthening and stabilizing domestic prices, so that many mills are not particularly concerned whether they get a slice of this large export business or not. They are fully convinced that they will be able to dispose of their forest commodities to good advantage at home or across the border, which, during the past year and a half has proved to be a profitable market for white pine, birch, maple, basswood, elm and brown oak, all going extensively into war work and government uses. Summing up, there appears to be little apprehension regarding a general immediate reduction in prices. There may be a drop in mill culls, which have gone very high in value, but the upper grades of all wood products will, it is contended, command not only the present figure but will in all likelihood advance from five to ten per cent. in order to take care of the added cost of production and operation.

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# Canada--The World's Papermaker

FROM Port Alice on the farthest shores of Vancouver Island to Murray St. Annes on Cape Breton, there stretches a string of more than 100 pulp and paper mills. It has been the writer's good fortune to visit a majority of them and to get



J. A. Bothwell,  
President Canadian Pulp  
and Paper Association.

a direct appreciation of what this industry means to the Canadian people. The mills are located more or less in groups, conveniently situated to wood and water power or transportation facilities and markets. In the former class are the mills of British Columbia, those near Cochrane and Ottawa in Ontario, at the head of the Saguenay and along the St. Maurice River in Quebec. In the second class is the most congested group in Canada, the 12 mills in a distance of six miles along the old Welland Canal, and the rather scattered group centring on Montreal. Isolated mills are found promiscuously through Eastern Canada. There are, at present, no pulp or paper mills in Alberta, Saskatchewan or Manitoba, largely because available sites lack transportation facilities, and are too far from markets. It is altogether likely that the future will see a growth in population and an extension of railways in the prairie provinces that will justify the erection of mills to develop the resources of wood available in some parts of them.

The permanent and fundamental industries of a country are those which are founded on natural resources. Apparent exceptions exist in countries like England, which manufacture raw materials into finished articles. It is true that cotton, silk, wool, metals, ores, paper pulp, etc., are imported, but England has quantities of coal and a supply of excellent and intelligent labor. Canada's natural resources, especially in power and raw material, are so abundant and varied as to make the Dominion almost self-sufficient. Fields, forests, fisheries and mines hold untold possibilities for the wealth and welfare of our people.

## Crown Land Pulpwood Not Exported

Among our permanent manufacturing industries, the production of pulp and paper and pulpwood is easily first. A recent estimate by the Dominion statistician puts the money invested in this business at \$186,374,905. These figures were based on 1917 reports, and there have been a number of developments since then, so we may safely say that \$200,000,000 is invested in the manufacture of pulp and paper in Canada. A considerable amount of this has come from other countries, principally England and the United States, although Belgian interests are also represented in Canadian mills. Statements of monetary investment in this particular industry are likely to be misleading, as they often fail to take an important fact into account, and one that makes this industry, more than any other, probably of national interest. It is this: With very few exceptions the manufacture of paper in Canada, and without exception the manufacture of pulp and the production of pulpwood, depends on the forest resources of the Dominion. These forests are for the most part owned and controlled by the people of Canada and administered through Federal or Provincial governments. The various forestry departments realize that wood is a crop grown on forest land, the same as wheat is on the prairie, and advantage of this is taken to provide a permanent source of income to the people, usually by selling a license to cut pulpwood and charging

## The Production of Pulp, Paper and Pulpwood, Ranks First Among Her Permanent Manufacturing Industries--By J. Newell Stephenson

ing so much a cord for all wood taken off. An unfortunate feature of the situation is that some people think their interest ends with the collection of the fee and give little heed to the necessity of taking such precautions in the matter of fire protection and cutting regulations as will insure the permanence of this source of income. It might be mentioned here that wood from settlers' clearings has been and will continue to be an important source of supply to the pulp mill. Settlers' wood is also important in that it makes up a considerable proportion of the pulpwood exported, since embargoes have been placed on such wood cut on Crown lands. The idea of this restriction was to encourage the erection of mills in Canada and has succeeded remarkably well. It is largely on wood imported from Canada that many United States mills depend for raw material. They bought more than 1,000,000 cords last year, or one-seventh of their pulpwood consumption. Without this they would probably have to come to Canada to build.

### Interest in Water Powers

There is an intimate connection between forests and water powers and the pulp and paper industry of Canada

proud of their development for the service of the people. The pulp and paper industry has no small part in this matter. About one-tenth of Canada's available water-power is developed, and of this amount one-seventh is used in the manufacture of pulp and paper. Only electric power companies have developed a larger amount, used principally by public service concerns. Only the United States has a greater total amount of water-power developed, and only Norway has a greater amount developed per capita than has our own country.

In regard to sources of other supplies, it may be said that when it becomes a necessary national policy fully to develop every national resource, the pulp and paper industry will be among the leaders in their utilization. Coal is consumed in large quantities, and we have large deposits of coal and peat. Sulphur is imported from our neighbor to the south but we have plenty of sulphur in the form of pyrites if it ever becomes economically feasible or politically necessary to make use of it for this industry. Limestone we have in abundance, and there are some good veins of sandstone for making pulp grinders.

These things are mentioned to show

sary to our daily life, for this is not the day for unnecessary things. The fact that it assists, directly and indirectly, in the development of our natural resources, and that it employs 25,000 Canadians in mill and yard, and approximately as many more in the woods, and pays them more than \$20,000,000 annually in wages is not sufficient reason for its existence. It must, and does, serve the people. One can realize the importance of the industry in this respect by trying to imagine what life would be without the newspaper and the magazine, without books and printed music, without letters of friendship or business, without roofing paper to keep rain from the settler and his stock, without building paper to protect his home from the wintry blast and wall-board and paper to make it attractive, without the paper bag for coffee and sugar, wrappings, boxes and cartons for food and clothing and other things, or special papers that minister to numerous daily needs. It is impossible to conceive of such a condition, so we may safely assume that the paper mill has a real place in our national life.

With one or two minor exceptions, Canada makes every kind of paper product that Canadians require, and, as we have seen, there is a lot to spare. There is at present no mill making blotting paper and none that makes true parchment paper, nor is there any that manufactures vulcanized fibre. These few instances by no means exhaust the list of pulp and paper products that could and should be manufactured in Canada. It is to be hoped that our expanding export trade and more intimate relations with other countries will foster such development, possibly by attracting capital and workmen from abroad when our favorable situation as regards raw materials, power and other items is more widely known. Expansion of our industries, especially those based immediately on our natural resources is greatly to be desired and can confidently be expected. It should, however, not outrun the demand or a period of stagnation will result, which is worse than insufficient growth. At present the pulp and paper industry is in a very favorable condition, and prospects for healthy growth could not be better. Canada needs more home-made paper of several varieties, and the world's markets are short of the principal wood-fibre products such as newsprint, which no other country is so well equipped to furnish.

## Will Be Greatest Exporting Industry

Pulp and paper are not only important in the way they contribute directly to the needs of the people of Canada, but perhaps in even a greater degree, though indirectly, by bringing money into the country in payment for the enormous exports of this industry. With the decrease in exports of munitions, pulp and paper mills will soon be exporting more goods than any other manufacturing industry in Canada, and bringing in money that is urgently needed to pay for the machinery, materials, etc., that we buy from abroad.

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Machinery in a Big Quebec Paper Mill where High-grade Writing Papers are Made.

is deeply interested in both. If the forest is likened to the back-bone and frame of the industry, then water-power can be called the muscles, man-power the brains, and such raw material as coal, sulphur, lime and chemicals the food that is fed into the vital organs represented by the mills with their extensive and varied equipment. A peculiar balance exists between trees and rivers. The wood is required by the mill for raw material, the river is required in most cases to furnish cheap transportation of the wood to the mill and, when harnessed to turbines and generators, to furnish power and light. But, if the wood is not properly taken from the forest, not only is the future growth prevented or perverted, but freshets and floods may be so encouraged as seriously to jeopardize the value of the river as a source of power.

Canada may well be proud of her water powers and even more

that the growth and development of the pulp and paper industry must have a wide effect on the development of every natural resource in the country, for must we not have food for the workers, and all kinds of material and machinery for them to work with? Does this not mean business for the woodsman, the farmer, the spinner, the weaver, the mechanic, the railroad man, the merchant and the banker?

### Ministers to Canada's Daily Life

Let us look at the industry now from the other side and see why it is neces-



A Typical Canadian Pulp and Paper Mill, Situated at Espanola, Ont.  
On the hill is seen the wood pile and paper mill; on the lower level, the power plant and ground wood mill.



# Fishing--Canada's Oldest Industry

**T**HE value of Canada's fisheries for the year 1917 amounted to \$52,352,044. For the statistical year of 1914, our fisheries amounted to \$33,207,748 in value. Within three years, the value of our fisheries has increased 40 per cent.

This is satisfactory as far as it goes, but it does not show a development commensurate with the enormous fishery resources with which Canada is endowed. The consumption of fish by Canadians is still meagre though it has been greatly stimulated of late through the efforts of the Canada Food Board. Our export trade, which absorbs the bulk of our fish production, is still capable of greater expansion through the employment of modern methods in fishing, curing and packing, and aggressive commercial agents abroad.

However, Rome was not built in a day. Our fisheries, after 300 years of prosecution, have developed exceedingly slowly, but within the last five years, an awakening is evident and the industry is progressing along modern lines. If the same rate of development is maintained, Canada's fisheries will become one of our greatest natural resources. Present indications are that it will attain that proud position within the next decade.

## Canada's Chief Fishing Grounds

Canada possesses in her territorial and adjacent waters the most prolific and extensive fishing grounds in the world. There is a coast line, excluding lesser bays and indentations, of over



Fishing From Dory on The Grand Banks, off Newfoundland.

5,000 miles on the Atlantic and 7,000 miles on the Pacific which are abundantly stocked with the best edible species of fish within the territorial limit. In our lakes and rivers we have something like 220,000 square miles of fresh water containing edible fish of excellent quality in great abundance and variety. Off our Atlantic coast lie the great shoal waters of the "Banks" which cover an area as large as Great Britain, and to which the fishing vessels of Canada, the United States, Newfoundland, France, and other nations voyage in vast fleets and reap a great harvest of cod, haddock, halibut, hake, pollock, etc. In 1913, statistics show that 1,280,000,000 pounds of these fish were taken on the Grand Banks by Canadian, Newfoundland and American fishing vessels. These Banks are the greatest fishing grounds known, and the quality of the fish caught upon them is of the best, owing to the coldness of the water caused by the sweep of the Labrador current.

On the Pacific coast there are no great fishing banks lying directly off Canada's shores, but the fishing ports of Prince Rupert, Vancouver and Steveston, are the nearest rail terminals to the extensive fishing grounds in the Gulf of Alaska and the Behring Sea. In 1913, fish to the amount of 890,000,000 pounds was produced from the Pacific fishing grounds.

Extensive fisheries are carried on in the waters of the Great Lakes and the lakes of the western provinces. The western lakes, remote from rail communications, are usually fished in the winter months and the catches are teamed out to the nearest railroad. During the winter season of 1917-18, 22,000,000 pounds of lake fish were produced from the lakes of Alberta, Saskatchewan and Manitoba, of which

*Great Variety of Salt and Fresh-Water Fish Taken—100,000 Persons, \$26,000,000 Capital and Thousands of Vessels Employed—By Frederick William Wallace*

7,000,000 pounds were whitefish. The catch of fish from Ontario waters approximates 45,000,000 to 50,000,000 pounds annually.

The value of the catch by provinces during the year 1917 indicates the wealth of fish in the territorial and adjacent waters of the province:

British Columbia, \$21,558,595; Nova Scotia, \$14,468,319; New Brunswick, \$6,143,088; Quebec, \$3,414,378; Ontario, \$2,866,419; Prince Edward Island, \$1,786,310; Manitoba, \$1,543,288; Saskatchewan, \$320,233; Alberta, \$184,009; Yukon, \$67,400.

## Many Species of Fish Taken

Coming now to the species of fish caught by Canadian fishermen, we find that the salmon is our most valuable fish harvest. Over \$17,000,000 of salmon were marketed from Canadian waters during 1917, and the bulk of these fish were produced in British Columbia and put up in a canned state. Our Pacific waters teem with five varieties of salmon known as Sockeye, Spring, Coho, Humpback and Dog Salmon. Atlantic salmon of an approximate yearly value of \$500,000 is caught by the fishermen of the Maritime provinces—New Brunswick and Nova Scotia producing the bulk of the catch.

Cod is second in value of catch, and is the principal fishery of our Atlantic waters.

During 1917, cod to the value of \$7,412,516 were landed by Canadian fishermen. The Pacific, with three varieties of cod—red, grey and ling—contributed a small proportion of the total amount as this fishery is only now being prosecuted there. With the development of the western markets, the cod fishery of the Pacific is destined to become an important industry as the fish are exceedingly prolific. The Pacific Sable-fish or Black Cod is not included in these figures, but it may be mentioned here that Pacific Sable-fish to the amount of \$879,000 were caught and landed in British Columbia during 1917.

Third in value of catch comes the lobster, which is purely an Atlantic sea fishery. The value of lobsters marketed in a canned and fresh state during 1917 amounted to \$5,654,025. Canada's Atlantic coast is one of the greatest lobster fishing grounds in the world, but are by no means inexhaustible.



Weighing Dried Codfish, Nova Scotia.

Great Lakes and Pacific, come fourth in value of catch with \$3,373,688 for 1917. The Pacific herring fishery accounts for approximately one-third of the total, and fresh water herring about one-seventh. These fish are exceedingly prolific in Pacific and Atlantic waters, and are capable of enormous development.

The purely Atlantic fishery for haddock, ranks fifth, with a value of \$2,936,719 for the year 1917. These fine deep-sea fish run in huge quantities upon the Banks at certain seasons of the year and are caught off our coasts by American fishing vessels in a greater proportion than by our own fishermen. Large quantities of haddock are smoked and marketed as Finnan Haddock, and Canadian producers on the Atlantic coast ship practically one-third of the catch in this form to all parts of Canada and the United States.

Halibut ranks sixth in importance, and is produced on both the Pacific and Atlantic. In 1917, halibut to the value of \$2,066,035 were caught and landed in Canadian ports by Canadian fishermen. About five-sixths of this quantity is caught by British Columbia fishermen. This is one fishery which cannot be said to be capable of still greater development and is now showing signs of depletion through heavy fishing by both Canadians and Americans. Years ago, halibut were exceedingly prolific on both oceans, and within the last 25 years the fishery has been extensively prosecuted. The Atlantic fishery declined some years ago, while that of the Pacific, which was thought to be inexhaustible, is now showing signs of depletion and steps are being taken to conserve the Pacific halibut before extinction. Halibut is a slow-growing fish and does not produce in the enormous numbers of cod, haddock, herring, pollock, hake and similar demersal sea species.

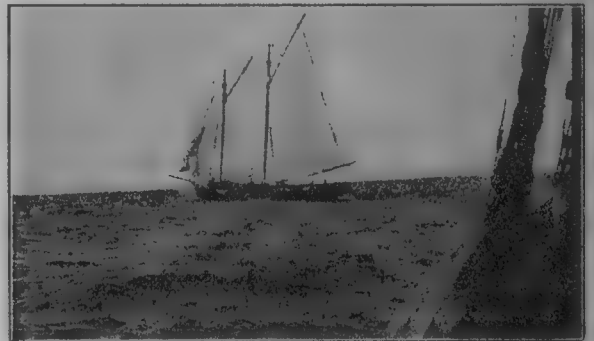
Sardines, or small herring, constitute a valuable Atlantic fishery which ranks

seventh in value. The sardine so called is not the genuine sardine of the European seas, but is a small herring which looks and tastes somewhat similar when canned. In 1917, sardines to the value of \$1,910,705 were caught and marketed by Canadian fishermen. The bulk of the catch is put up in New Brunswick along the shores of the Bay of Fundy, where, at certain seasons, these fish swarm in myriads.

Mackerel—a nomadic fish of delicious quality native to the Atlantic—is caught to the amount of \$1,333,354 annually. These fish strike in along our Maritime coasts in schools during the summer season and are caught in traps and shore seines. Vast numbers are captured off our shores by American seiners who follow the fish in their migrations from the Virginia Capes to the Gulf of St. Lawrence. By far the largest quantity is caught by American fishermen who reap a rich harvest of these beautiful fish. Few, if any, Canadian vessels fit out exclusively for mackerel.

Our premier fresh-water fish of the lakes—Ontario and Western—is the whitefish which ranks ninth in the value of Canada's fish species. Whitefish to the value of \$1,248,000 were caught by Canadian fishermen during 1917.

Smelts to the value of \$1,027,553 were marketed during 1917—the bulk coming from the Atlantic with a small proportion from the Pacific. The smelt fisheries of New Brunswick are the finest on the North American continent. Lake trout and pickerel is valued



Fishing Schooner on the Atlantic Banks.

at \$699,000 and \$650,000 respectively—these following whitefish in our lake and river fisheries.

Following is an interesting list of the species and value of other fish produced in Canadian waters by Canadian fishermen. Many of the fish enumerated herewith are capable of greater development and in course of time will attain premier rank among our fishery resources:—

Hake and Cusk (Atlantic sea fish), \$890,265; Pollock (Atlantic sea fish), \$486,195; Shad (Atlantic sea fish), \$52,250; Alewives (Atlantic sea fish), \$196,482; Soles (Atlantic and Pacific sea fish), \$81,109; Flounders (Atlantic and Pacific sea fish), \$53,595; Skate (Atlantic and Pacific sea fish), \$20,883; Oolachons (Pacific sea fish), \$10,991; Brill (Pacific sea fish), \$51,420; Tom Cod (Atlantic sea fish), \$38,893; Rock Cod (Pacific sea fish), \$8,688; Pilchards (Pacific sea fish), \$11,810; Whiting (Atlantic and Pacific sea fish), \$2,725; Grayfish (Atlantic and Pacific sea fish), \$5,780; Swordfish (Atlantic sea fish), \$33,178; Albacore (Atlantic sea fish), \$81,961; Oysters (Atlantic and Pacific), \$109,265; Clams and Quahaugs (Atlantic and Pacific shellfish), \$222,965; Crabs, Cockles, Dulse (Atlantic and Pacific), \$66,918; Scallops (Atlantic shellfish), \$26,800; Squid (Atlantic and Pacific sea fish), \$29,751; Caplin (Atlantic sea fish), \$41,449; Sturgeon (Atlantic and Pacific and Lake), \$98,011; Bass (Atlantic and Pacific and Lake), \$24,482; Eels (Atlantic and Lake), \$90,457; Perch (Lakes), \$126,723; Pike (Lakes), \$429,386; Tullibee (Lakes), \$333,686; Maskinonge (Lakes), \$3,188; Catfish (Lakes), \$38,210; Goldeyes (Manitoba Lakes), \$40,209; Carp (Lakes), \$40,890; Mulletts (Lakes), \$22,026.

A careful perusal of the species and values above mentioned will show an

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Fishing Boats at Prince Rupert, B.C.



# The Leather Industry of Canada

**I**N Canada may be seen in practice a history of the leather industry. Its growth may be traced step by step from the old barn, where a man and a boy toil over an odd hide till, in the course of time it is converted into a sleigh rug or a pair of boots, to the huge factory employing scores of wage-earners, and fed by tons of raw material where modern machinery and methods turn out the daily shipments of finished leather. Progress! healthy, steady, wealth-building progress! It is the key-note of the leather industry of the Dominion today. The man with the barn yesterday has a small factory today; he will have a modern plant tomorrow. All through the country, small factories are growing larger, old methods and machinery are being scrapped; new buildings, new methods and new machinery are taking their place.

Ever since the white man landed in America, leather has been tanned here, and before he came the red man used to tan the moose and bison hides. Nearly 100 years ago a boot and shoe factory was set up in Montreal which, to quote a contemporary periodical, employed "every labor-saving machine," and yet it is only within the last 15 years that the industry has taken any great strides of progress. In that 15 years, however, great improvements have been made. Small tanneries then manned by four or five men have been built into modern plants today and are still growing. Others are to be seen struggling in their foot-steps. All are advancing, all progressing, from the man who has just taken the path to the man who is developing an export trade and establishing new branches.

## From Animal to Finished Product

Before going further into the subject it might be well to note that the term "leather industry," applied in its widest sense, denotes more than the trade of converting hides and skins into leather. It denotes the whole succession of trades from the time the skin is taken from the animal to the time it is put on the market as a finished article. It is the object of this article to merely trace the industry over its wider field and deal more particularly with the actual manufacture of leather as such.

The first man who handles the hide or skin is the slaughterer who is engaged in another industry. The skin or hide is to him a by-product or at least a secondary consideration. From this source the hides and skins pass to the hide merchants and wool-pullers, who are the first members of the leather industry to handle them. They receive sheep skins from domestic markets, the western States and Australia as well as other sheep-growing countries; goat skins from China, India and Africa, etc.; and cattle hides from country butchers and packing-houses in Canada and the United States. Their trade is to create facility of time and place. To them the tanner can apply for carlots of certain sizes and weights which he can secure from them in greater uniformity than he can elsewhere. The hide merchants and wool-pull-

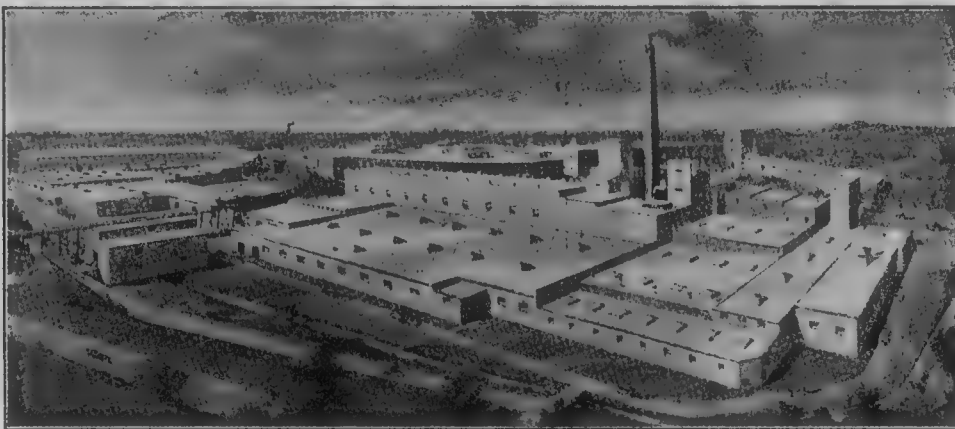
## Great Strides in Last 15 Years—Factories Widely Distributed—Stage Set for Great Development—

By George E. Shortt, B.A.

ers of Canada are situated at shipping points convenient to the tanning centres. These are Montreal, Quebec, Halifax, St. John and Toronto. These merchants, in addition to their domestic business, carry on a large foreign trade which amounts to from 19 to 20 millions of dollars annually for the whole Dominion.

The next step brings us to the tanners or manufacturers of leather with whom we will deal more fully later. The raw

St. Hyacinthe, P.Q., has a large and modern counter factory in conjunction with their tannery. Counters are used in the manufacture of shoes as heel supports and leather-board is used for mid-soles in lieu of solid sole leather. These leather-board mid-soles will wear very well and are very tough as long as they are kept dry but they are unable to resist moisture to the same extent as genuine sole leather.



The Culmination of Tannery Development—An Oak Leather Tannery at Acton, Ont.

hides and skins are here converted into the different kinds of leather, such as sole for boot soles, uppers for the tops of boots, harness leather, belting leather for power transmission belting, glove leather, upholstery leather, moccasin and larrigan leather and fancy leather for book-binding, travelling cases, etc.

In addition to the tanners of leather there are the manufacturers of imitation leather, shoe counters and leather board. The first of these is used for upholstering and the manufacture of fancy leather goods as a substitute for genuine leather. The largest and most important establishment, if not the only one in Canada, in this business is in New Toronto, Ontario. The exhibit of this firm at the Central Canada Exhibition in 1918, entitled "How Many Hides Has a Cow?" attracted considerable attention. Counters and leather-board are manufactured in counter factories. Another big firm at

## The Raw Material for Many Trades

The leather as produced by the tanner provides raw material for many other trades. Sole and upper leather is raw material for the boot and shoe trade which is by far the largest and most important. Some idea of how important it is may be gained from the fact that there are over 150 factories in Canada with a combined capitalization of approximately \$40,000,000, giving employment to nearly 15,000 men and women. The industry is at present confined largely to Montreal, Quebec and Toronto, although increasing numbers of factories are springing up in the smaller towns. The growth of this branch of the industry is remarkable and though no accurate gauge can be set, some idea may be secured from the last Dominion census figures available. These go to show that

not only has the Canadian boot and shoe trade handled the growing demand for boots and shoes in the Canadian market but it has cut down the value of imports from \$4,000,000 to \$2,000,000 and raised the value of exports from \$42,000 to \$537,000 since 1913. During the end of last year the boot and shoe manufacturers of the Dominion organized at a convention held in the city of Montreal, and great developments are looked for through co-operation in foreign markets.

The harness leather goes to provide raw material for over 100 establishments making harness and saddlery. These factories are scattered over the whole of Canada and have a combined capitalization of nearly \$6,000,000. They give employment to 1,500 wage-earners. The imports of harness and saddlery have been reduced by nearly half since 1913, and the exports increased from \$13,259 in that year to over \$6,000,000 in 1916. Leather belting is manufactured by tanners themselves in most instances.

Gloves, upholstery and fancy leather goods provide work for fewer wage-earners but have a capitalization amounting to over \$2,000,000.

When the figures for all leather and its manufactured products are taken it will be seen that the leather industry has an important place in the economic development of the country. In addition to the number of persons engaged in supplying machinery and raw materials, other than hides, to be used in the industry a direct livelihood for some 20,000 wage-earners and their dependants is provided by the industry itself. There are at the present time nearly 600 establishments engaged in the leather industry in Canada, having together a capitalization of over \$60,000,000. The cost of raw material consumed in the year 1915 was \$45,201,496 and the value of products turned out amounted to over \$71,000,000. That these figures are fractional of their present size is beyond doubt, and now that peace is at hand and normal conditions within sight they will increase as never before.

## Where the Tanneries are Located

In every industry there are individuals however, who will not open their eyes to the signs of the times, and so it is in the leather industry. There are also certain individuals who do not wish to progress but are content to keep "the noiseless tenor of their way." Thus we have with us yet a few of the old-style hand tanneries. These, without exception, have their trade confined to purely local and spasmodic activities. The latter type of unprogressive tanner is to be found in the rural districts of the Maritime provinces, although he proves the exception to the rule even there, as witness the large and up-to-date tanneries at St. John, N.B. and Picton, N.S., as well as the progressive tanneries at Middle Sackville, N.B., Hopewell and Bridgetown, N.S. The former type is to be found in the city of Quebec,

Continued on page 7



Hides and Quebracho on their way to a Tannery.



# Shipbuilding and Shipping

"SHIPS, more ships, and still more ships," is the clarion call that floats around the world with insistent appeals to civilization, and Canada, hearing, has answered the call. It is estimated that owing to loss by enemy submarines the world's tonnage is at least 10,000,000 tons short of what it was when the war broke out. Efforts have been made to cope with this shortage of bottoms, and the British government arranged for the Imperial Munitions Board to have constructed 43 steel ships of a tonnage of 211,300 deadweight, and 46 wooden ships of a tonnage of 128,000 deadweight. The expenditure for steel ships was \$40,000,000, for wooden ships, \$24,500,000, or a total of \$64,500,000 for 89 vessels, with an aggregate tonnage of 339,300.

Sir Robert Borden, speaking at the opening of parliament in March of last year, said that an appropriation of \$25,000,000 for shipbuilding during 1918 had been made, and that during 1919 it was expected that 50 new ships would be commissioned, with an aggregate tonnage of 235,000. Three types of vessels would be built—one of 3,000 tons, one of 5,000 tons and one from 8,000 to 10,000 tons. All would be cargo vessels of standard design and construction. Thus, at the end of 1919, Canada's contribution to Allied shipping would be approximately 575,000 tons.

The plates and constructional sections for these ships had to be purchased in the United States, but arrangements are now in progress which, when completed, will enable the Dominion Iron and Steel Corporation to manufacture all necessary plates, angles, channels and other sections. When, on December 3, last year, the Canadian Pioneer was launched at Messrs. Canadian Vickers' yards, the Hon. C. C. Ballantyne stated that the government had, at that time, 39 vessels under construction, and this number was made up as follows: Lake type, nine; 4,300-ton type, six; 5,100-ton type, eight; 8,100-ton type, 14; 10,500-ton type, two.

It cannot be denied that Canada is feeling the pressing necessity of ships—ships to be placed on the Atlantic and Pacific oceans, as well as on the Great Lakes. They are required to complete the government's transportation scheme, and to work in co-operation with the transcontinental system.

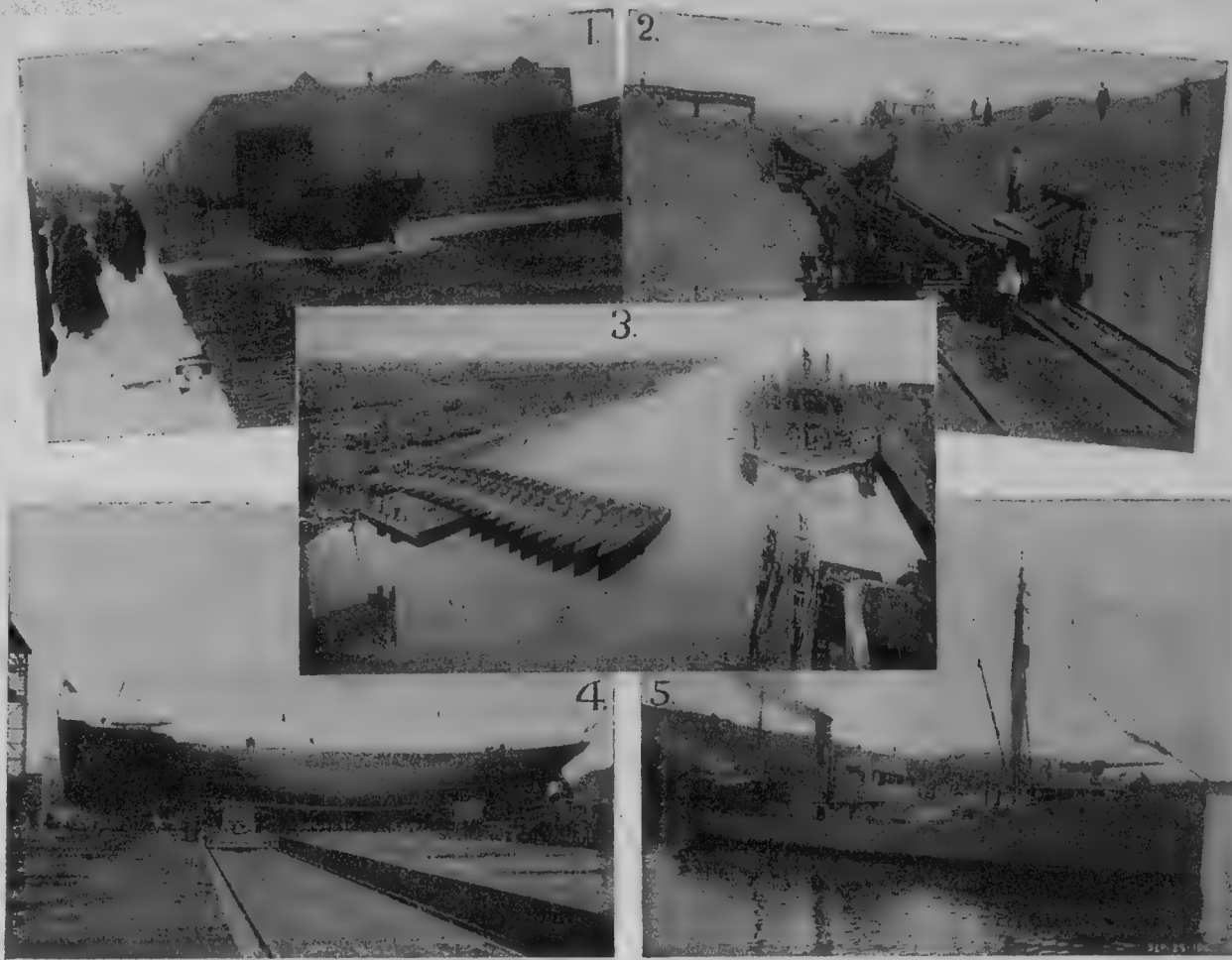
## Launching of S.S. Canadian Pioneer

The Canadian Pioneer was the second of the government's mercantile marine ships, all of which will be managed and operated by D. B. Hanna and his board of directors, by the creation of a steamship company, the stock of which will all be government owned. For economic reasons it is imperative that we go after export trade in the most vigorous manner, and the government has done and is doing all in its power to help forward the desirable end, but it must have the whole-hearted assistance and co-operation of manufacturers. It will not be possible to deal in detail with all Canadian shipping yards, but we can at least show some part of what has been accomplished at Messrs. Canadian Vickers' works at Montreal. The

*The Impetus Given by the War will be Carried into the Reconstruction Period—By W. G. Dauncey*

or at the water's edge, and decided upon the former, a course which necessitated transporting the vessels over the intervening 1,000 feet by some mechanical means.

These boats are of the single-screw steam trawler type, and were built to the full requirements of Lloyds' Register Class 100-A1 steam trawlers. Single deck, with raised quarter and fore-castle decks and steel deck house. The top of the boiler house and winch casing form the navigating bridge, on which is placed a steel structure containing the captain's room and wheel-house on top of the deck-house aft there is an enclosure for the wireless telegraph installation, and alongside of the life-boats platforms have been provided. Two masts of Oregon fir are fitted, the fore-most being stepped in a cast-housing, and the main is housed by the deck-house aft. Steam steering engines are installed in the upper engine-rooms, and included in the deck machinery equipment are a double-cylinder two-drum trawl winch, with reversing engines; a double-cylinder single-drum hoister, with non-reversing engines, and a steam windlass. After each hull was completed in its berth it was supported upon two cradles, which were in turn carried upon four specially constructed trucks,



Scenes in Canadian Shipbuilding Yards Where Part of the War Wastage of Ships is Being Replaced.

1.—Launching of the S.S. Canadian Pioneer, the first of the Canadian government's mercantile ships, Montreal, last December. 2.—Special launching trucks, drawn back after launching a vessel. 3.—Filling-out basin and dry dock, Montreal. 4.—Port side of Navarin on transfer table. 5.—Navarin completed, ready for delivery.

third illustration is from a photograph of the fitting-out basin and dry dock; the latter is capable of lifting 25,000 tons and is the largest floating dock in America. It was designed by Clark and Stansfield, London, England, and was built by Vickers Limited, of Barrow-in-Furness. Canadian Vickers Limited started the construction of their first ship at the latter end of 1914, and the following data will give some idea of its activities during the intervening time:

## One Canadian Firm's Output

1 Icebreaker, for Russian Government: Length between perpendiculars, 275 feet; breadth moulded, 57 feet 6 inches; depth moulded, 20 feet 6 inches.

1 Twin-Screw Combined Hopper and Barge-Loading Dredge, for Canadian Government: Length between perpendiculars, 284 feet; breadth moulded, 48 feet; depth moulded, 20 feet 6 inches.

24 Submarines, for British and Allied Governments.

214 Motor Boats, for British Government. 6 Mine-Sweeping Trawlers, for Dept. of Naval Service: Length between perpendiculars, 125 feet; breadth moulded, 23 feet 4 inches; depth moulded, 13 feet 6 inches.

26 Mine-Sweeping Drifters, for Dept. of Naval Service: Length between perpendiculars, 84 feet; breadth moulded, 19 feet 3 inches; depth moulded, 10 feet 11 inches.

1 Single-Deck Cargo Vessel, S.S. Portanger, for Norwegian interests: Deadweight carrying capacity, 7,263 tons; length between perpendiculars, 380 feet; breadth moulded, 49 feet; depth moulded, 30 feet.

1 Single-Deck Cargo Vessel, S.S. Sam-manger, for Norwegian interests: Deadweight carrying capacity, 7,359 tons; length between perpendiculars, 380 feet; breadth moulded, 49 feet; depth moulded, 30 feet.

4 Single-Deck Cargo Vessels, for Ministry of Shipping: Length between perpendiculars, 380 feet; breadth moulded, 49 feet; depth moulded, 30 feet. The deadweight carrying capacity of these vessels being as follows: War Earl, 7,211 tons; War Duchess, 7,273 tons; War Faith, 7,263 tons; War Joy, 7,267 tons.

1 Single-Deck Cargo Vessel, S.S. Canadian Pioneer, for Canadian Government: Deadweight carrying capacity approximately 8,100 tons; length between perpendiculars, 400 feet; breadth moulded, 52 feet; depth moulded, 31 feet.

1 Single-Deck Cargo Vessel, S.S. Canadian Voyager, for Canadian Government: Deadweight carrying capacity approximately 4,350 tons; length between perpendiculars, 320 feet; breadth moulded, 44 feet; depth moulded, 25 feet.

Beyond these achievements the engines, boilers and the deck machinery for all of these cargo vessels were built in the yards, as was also that for eight of the trawlers. The entire resources of this company have not been devoted to shipbuilding alone, for they constructed and installed four of the largest pulp digesters ever built in Canada, and are regularly turning out steam and hand steering gears, safety steering telemotors, winches, windlasses, etc., etc. They also executed a contract for 24 water tube boilers for the Imperial Munitions Board. They now have on hand orders for five 8,100-ton and one 4,350-ton cargo vessels for the Canadian government and one 8,300-ton cargo vessel for French owners. The amount of money invested in this plant is in the region of \$12,000,000, and the number of employees is about 3,000. Like most other plants having machine shops, this firm handled shell contracts and turned out 1,365,860 of the smaller sizes.

## Shipbuilding at Fort William

Early in February, 1918, the Canadian Car and Foundry Company undertook to build 12 steel mine-sweeping vessels for French interests, and satisfactorily completed their contract before the middle of November of the same year. The work was done at the Fort William plant, and the boats were actually built about 1,000 feet away from the water. The executive had to decide whether it would be better to fabricate the ships adjacent to the existing shops

to which was attached a cable. By means of this cable a hull was drawn from its berth on to a transfer table, which allowed of lining up with the single set of tracks laid from this transfer table to the river.

After completion, these trawlers were all inspected by representatives of the French Commission, and after satisfactorily passing speed, coal consumption and other trials, were finally accepted.

## Shipbuilding from Coast to Coast

Shipbuilding activity in Canada is apparent from the Atlantic to the Pacific coasts, but limited space prevents any detailed description of other yards, although passing reference may be made. The Le Quesnoy, a vessel of 4,300 tons deadweight, was launched at the yards of the Dominion Shipbuilding Company, Toronto, on November 23, 1918, and was the third of the same type built during the year. The Toronto Shipbuilding Company was responsible for sister ships, built to the order of the Munitions Board. These vessels are 259 feet long, with a moulded depth of 25 feet, and are equipped with triple expansion engines and water-tube boilers. The Collingwood Shipbuilding Company, Ontario, have been busily engaged on contracts for the Imperial Munitions Board, and the Port Arthur Shipbuilding Company was responsible for maximum production, including the Victoria and the War Horus. From east to west, from Halifax to Vancouver, the dominant activity is shipbuilding and the absolute and imperative necessity for intensive construction cannot be over-estimated.

In looking back over the last gloomy days of 1914, one realizes the wonderful achievements of the British navy. Within 14 days after diplomatic relations were severed between the British and Germans, and within seven days

Continued on Page 71





## When Johnny Comes Marching Home Again

The home fires so loyally kept burning will brighten the welcome for our boys back from their victory job.

Every lad of them is so eager for home baking—what a joy to serve again the mother-made bread, pies, cakes and puddings, just as they remembered them “over there!” So dig up your old FIVE ROSES Cook Book. Turn happily to those veteran recipes that have gone over the top more than often in the past.

And remember that your old FIVE ROSES flour is slowly convalescing, improving every day in quality, and soon, when the restrictions are finally removed, will come back to you restored to its normal pre-war quality, all the better, sturdier, more reliable for its patriotic self-sacrifice.

*Lake of the Woods Milling Company Limited*

Makers of Five Roses Flour  
CANADA



### TO MAKE OVER 200 CAKES WITHOUT WASTE

In the famous FIVE ROSES Cook Book, there are hundreds of cake recipes without eggs and with few ingredients for the economical cook, hints for left-overs and scraps that reduce expense. More than 400,000 women (one for every boy in France) are now making their cakes, bread, rolls, puddings and pastries from its 144 pages. If you wish to be successful, send for the FIVE ROSES Cook Book. If you wish to be economical, send 30 cents in stamps for YOUR copy. Address: LAKE OF THE WOODS MILLING COMPANY LIMITED, WINNIPEG.



# Canadian Flour Mills

**I**N the crop year, September 1, 1917, to August 31, 1918, Canadian mills ground, in round figures, 86,000,000 bushels of wheat. How large, relatively, this quantity is, will appear from the fact that in only one year prior to 1905 did Canada's total production of wheat ever equal the quantity purchased and used by the Canadian mills last year. Previous to 1911, Canadian mills were altogether the largest market for Canadian wheat growers, purchasing in every year more wheat than was sold for export, and this is true also of the crop year 1914-15, but in the years of the largest crops since 1910 the export wheat trade has exceeded the trade with the mills. The purchases of the Canadian mills have increased steadily and rapidly year by year, while the exports of wheat vary greatly from year to year, and the variation is not always in direct relation to the size of the crop. In 1906-07, for example, out of a crop of 125,000,000 bushels, 33,000,000 bushels were exported in the form of wheat, while in 1908-09, out of a crop of 128,000,000 bushels, no less than 45,000,000 bushels were exported; and in 1911-12, out of a crop of 216,000,000 bushels, only 78,000,000 were exported as wheat, while in 1912-13, out of a crop of 199,000,000 bushels, no less than 97,000,000 bushels were exported. On the other hand a steadily expanding demand has characterized the trade with Canadian mills.

The flour milling industry is the primary consumer of wheat, for, with the exception of a little low grade wheat sold direct for animal feed, practically all wheat is converted by mills before being used for either human or animal food. Milling is a fundamental and necessary industry, and outside of purchases made for seed and the very small trade in unmillable grades, all wheat is bought for or on account of mills, either in Canada or in other countries.

## Rapidly Expanding Export Trade

Canadian mills have supplied almost entirely the flour requirements of the growing population of Canada, and have rapidly expanded their export trade, as appears from the following returns:

CANADIAN FLOUR EXPORTS			
Crop Year	Barrels	Crop Year	Barrels
1905-06	943,777	1911-12	4,273,472
1906-07	1,000,777	1912-13	4,373,872
1907-08	1,595,208	1913-14	4,666,267
1908-09	2,020,467	1914-15	4,897,129
1909-10	3,412,625	1915-16	7,897,453
1910-11	3,262,147	1916-17	8,024,602
		1917-18	10,826,433

The very large export trade during the war period, and particularly that of the year 1917-18, was of course secured under abnormal conditions, but during the ten years before the war, Canada's flour exports had been increasing proportionately faster than those of any other country. The chief flour exporting countries in order of importance before the war were: United States, Canada, Germany, Australasia, Argentina, Russia, Balkan States, United Kingdom, Belgium and British India. Until about the year 1904, the United States dominated the international flour trade, supplying a proportion of the whole which ranged as high as 72 per cent. in the year 1901. From 1904 to 1914, the United States supplied about 40 per cent. of the world's flour exports. International trade in flour had not, on the average,

**600 Establishments with Nominal Capacity of 120,000 Barrels per Day supply Home Market and Expanding Export Trade--By W. Sanford Evans**



Four of the Big Flour-Milling Units, Owned by the Four Big Milling Companies of Canada. Upper left: The Port Colborne, Ont., plant of the Maple Leaf Milling Company. Upper right: St. Boniface, Man., plant of Western Canada Flour Milling Company. Lower left: Mill C, Kewatin, Ont., Lake of the Woods Milling Company. Lower right: Mill and Terminal Elevator of the Ogilvie Milling Company, at Fort William.

shown any increase in this latter period, and the smaller proportion secured by the United States represented smaller exports from that country, due in large part to the greater effectiveness of the competition of mills in the importing countries as well as in other exporting countries. That Germany should have been the third largest exporter of flour is surprising, in view of the fact that she must import a large quantity of the wheat she uses, and the result can be explained only by a deliberate governmental policy, by duties and bounties, to develop the German milling industry to a point at which it would be amply sufficient to provide in case of necessity for the needs of the German population and still have something to spare.

Five-sixths, on the average, of all the wheat grown in the world is consumed in the countries where it is grown, being ground locally into flour or used for seed, and only one-sixth is exported in the form of wheat and flour. The proportion exported as wheat is very much greater than that exported as flour. Not only are efficient mills in an importing country in a strong position to compete for the home flour trade, but, with the exception of Great Britain, the Netherlands and Denmark, most of the principal importing countries charge higher duties on a barrel of flour than on four-and-a-half bushels of wheat. Only a few of the countries that require to import breadstuffs have, however, developed a milling industry fully capable of supplying domestic needs, and the majority of the countries of the world must import more or less flour because they are not equipped to grind successfully all the breadstuffs they need. Before the war Canada was exporting wheat to less than 20 countries, but flour to some 50 countries, and much the same proportions prevailed in United States export trade. During 1917-18, Canada exported a quantity of flour representing between 55 per cent. and 60 per cent. of the total output of its mills, while before the war it was exporting perhaps only about 40 per cent. Export trade forms a larger proportion of the business of Canadian mills than it does of the mills of any other country.

The consumption of flour by any particular population maintains a fairly even level throughout the year, that is, almost the same quantity is consumed in

every month and it is, moreover, of great importance in any industry to maintain a steady operating ratio. Looked at as a whole the Canadian mills do not possess any very large amount of storage space for wheat, and even if the line elevator systems of the larger mills are taken into consideration the average position is not greatly altered. The result of a fairly steady demand for flour and limited storage space is that the Canadian mills draw pretty steadily throughout the year upon the general stocks of wheat in the country. Even the export trade in flour is very much more even than that in wheat. The crop year 1917-18, mentioned above, well illustrates, as shown by the following returns, the difference in the monthly distribution of wheat and flour exports:

CANADIAN WHEAT AND FLOUR EXPORTS 1917-18.		
Month	Wheat Bushels	Flour Bbls.
September	2,177,538	883,752
October	14,318,403	634,598
November	24,749,731	986,954
December	20,556,572	933,163
January	4,505,895	885,764
February	5,111,796	901,611
March	8,777,716	1,049,478
April	5,945,878	1,139,574
May	4,376,587	753,338
June	3,342,797	1,171,336
July	1,744,191	778,337
August	1,006,088	618,728

The importance to transportation, financial and grain handling interests of an even distribution of business is just as great as is a steady operating ratio to a manufacturer. Although the millers in wheat-importing countries also aim at regularity of output, their supplies of wheat are drawn from many different countries and from crops maturing at different seasons, and the practice has been to draw heavily from one country at one season and from another at another season.

## Grind 120,000 Barrels Per Day

According to returns of a postal census conducted by the Dominion Bureau of Statistics, for the calendar year 1917, there were in Canada in that year 1,093 cereal and grist mills of all kinds, operating with a capital amounting to \$72,573,982 and with 7,682 employees upon the pay-rolls. During the year these establishments purchased and ground the following quantities of grains:

Kind of Grain	Bushels	Kind of Grain	Bushels
Wheat	84,478,264	Corn	1,507,074
Oats	14,600,674	Peas	388,243
Barley	2,786,258	Buckwheat	1,072,675
Rye	1,873,789	Mixed Grains	10,871,978

It is impossible to state how many of the above establishments can properly be classed as flour mills, but the number will be in the neighborhood of 600, with a total nominal capacity of not less than 120,000 barrels per day (24 hours).

The great majority of flour mills are small in size and do not operate full time. Out of a list of 599 Canadian mills, nearly all of which make and sell wheat flour, no less than 409 mills have a capacity of less than 100 barrels per day each, while 114 mills have a capacity of between 100 and 200 barrels per day, 23 mills a capacity between 200 and 300 barrels, so that 546 mills out of 599 are below 300 barrels per day capacity. There are only 40 mills in Canada with a capacity of 300 barrels per day and over, and of these only 22 have a capacity of 1,000 barrels per day and over; and of these latter only 15 mills have a capacity of 2,000 barrels per day and over. The largest mill in Canada has a rated capacity of 12,000 barrels per day.

## Evolution of Milling Machinery

The great disparity in size and in output of mills indicated by the above figures, is an interesting feature of the milling industry, not only in Canada but in most other countries, and is, perhaps, more marked in this industry than in any other. The first process of treating wheat was by pounding or crushing with a rounded stone, and then, no doubt, almost every family had its own plant. The later process of grinding between stones and the invention of the revolving millstone, at first rotated by hand labor, then by horses or donkeys and finally, about the beginning of the Christian era by water-wheels, or still later by windmills, made possible the establishment of flour mills with a product capable of supplying many families. Domesday Book refers to some 500 flour mills in the counties of Norfolk and Suffolk alone, so that the early mills were both small and numerous. It was not until the close of the 18th century that steam power was first used in a flour mill. Although there had been many improvements during all these centuries, the great development in milling has come within the last 80 years, for the roller process has been in use only about that length of time. The modern completely automatic roller mill, which is not yet 50 years old, is a remarkable mechanical achievement, which is capable by a continuous process of receiving wheat, cleaning and conditioning it, breaking, sorting off from flour stock, reducing the latter to any degree of fineness, separating both flour and feed into desired grades and delivering both at spouts ready to be bagged.

While this wonderful development in mechanical equipment has made possible the big mill of today, it has also increased the effectiveness of smaller mills, and both classes continue to exist in the same country. The smaller mills, as their numbers suggest, are very widely distributed through all parts of Canada, where they afford local markets for wheat and local sources of supply for flour and feeds. Only at certain points, or along certain lines, can big mills be successfully established. A mill requiring from 10,000 to 50,000 bushels of wheat every 24 hours must be located in such position with respect to wheat-producing territory that it can

(Continued on Page 78)



# Manufacturing Agricultural Machinery

**I**N no department of manufacturing enterprise in Canada is there a brighter outlook for permanent prosperity than that facing the agricultural implement industry. While emerging from a four-year period of reduced production, the after-war prospects are exceedingly bright, and provision has been made to take care of an increased business both at home and abroad. From the position of having had less men employed than under normal conditions, manufacturers of farm machinery are now able to provide employment for many hundreds of workers additional to the number engaged in this industry in pre-war days. The world's granaries were almost empty after more than four years of warfare. Reserve supplies of food must again be built up. Countries that were able to import foodstuffs in the past will now be forced by economic necessity to provide a greater proportion of the cereals for their own consumption within their boundaries. Markets for farm implements that have been entirely or partially closed to the Canadian exporters will now require larger quantities of these products from the Dominion than ever before.

Shipping conditions greatly impeded the export trade in this as in all other lines. Most of the warring countries either did not import at all, as in the case of the Central Empires, or took only a portion of their pre-war requirements, an instance of which is Australia and New Zealand. Makers of farm machinery entered on the production of munitions, but when the demand for war materials fell off, they lost no time in turning back to the manufacture of commodities to serve the arts of peace. Single-purpose machines, capable of being used for munition-making only are scrapped, and others that can be adapted to other kinds of manufacture are either sold or turned to the needs of the enlarged plants for making plows, seeding machines, binders, etc. The workmen formerly engaged in the production of shells are turned back to their former work, and a portion of the labor discharged from munition plants was engaged in the Ontario plants of the farm implement manufacturers.

## Productive Capacity Being Enlarged

Productive capacity is being enlarged to the extent of about 25 per cent., as compared with the years 1912 and 1913. The extra amount of labor that will be given employment will approximate the same percentage. Canada is likely to benefit largely by the increased needs of Europe for the commodities manufactured by this industry. Devastated lands and buildings in the invaded areas will require the expenditure of much time and labor to restore them to their former productivity. Huge quantities of implements will be needed to replace that which has been worn out or wantonly destroyed. The recon-

## Important Branch of Canadian Industry--Large Export Trade--Prospects Commensurate with Canada's Agricultural Possibilities--By Lloyd Moore

struction needs of the warring countries will provide for a tremendous trade that will be sufficient to give ample business to all who are able to compete for it.

The Western farmer may be accustomed to think of the Canadian agricultural implement industry as existing principally to satisfy domestic requirements. The export markets are, however, of the greatest importance to the manufacturer. Canada's products have found their way to all quarters of the globe, and they have established a reputation for themselves in competition with the best that other countries could produce. This export business will be more prominent in the next few years than it has been in the past.

## Survey of International Market

A brief survey of the international market both in prospect and retrospect may be of interest as showing the ramifications with which the export trade is bound up. Supplying of credits is of great importance in conducting this business. The financing aspect of the situation is one that is complicated, in shipping goods to Russian, Australian, South African, Argentine, French, Italian, Roumanian, Spanish and other customers in foreign markets.

On the outbreak of war, trade relations with Germany and Austria-Hungary, both of which imported Canadian agricultural implements, were abruptly terminated. The disorganization of Russia's national life brought an end to commerce with that country. The need for implements will be very great in Russia when more stable conditions prevail again. Seeding machines are mostly in request from this country, since the American-made grain and grass-cutting machines are exported to Siberia in large quantities. Spain presents a fruitful field, and much more extensive business could have been done in the last two or three years if shipping conditions had been more favorable. The Canadian-made products have made a good impression in that market and a healthy after-war trade is practically assured.

The Scandinavian Peninsula was practically cut off after the beginning of the war, and exports to Holland as well were practically discontinued.

French imports from Canada were largely cut down on account of the occupation of a large part of the best agricultural lands. Great Britain took considerably more Canadian farm implements than under ordinary circumstances, since production of foodstuffs was given more attention during the

war, and the factories ordinarily engaged in their manufacture in that country were turned over wholly to war work. In the Near East, Roumania and Bulgaria were formerly importers, but the war situation there prohibited the carrying on of trade after 1914.

The shipping situation cut off Australia to a considerable extent, although the enhanced prices made the exports to that country measure up very well, considering the ocean tonnage scarcity. The South American trade has its attractions for the Canadian exporters. The head of one Hamilton concern stated that seeding drills, plows, etc., were in demand for Argentina and that a large business can be transacted with that country. The Dominion has made much progress in this field, and hopes are entertained for a considerable business with Argentina and a somewhat

on the part of the concerns that no longer figure as separate entities. Capitalization in 1910 was placed at \$45,232,098, as against \$59,500,941; salaries and wages decreased from 5,551,647 in 1910 to \$4,175,364 in 1915, and cost of materials in the same periods were \$10,477,140 and \$5,978,070 respectively. Value of products stood at \$20,722,722 in 1910 and at \$13,354,766 in 1915. The industry is centred almost entirely in Ontario, as is shown by the following comparison of totals for that province for Manitoba and for the whole of Canada, according to the 1915 returns:

	Ontario. 34	Manitoba. 6	All Canada. 48
Establishments	.....	.....	.....
Capital	\$57,113,943	\$772,073	\$59,500,941
Salaries and wages	3,849,945	108,237	4,175,364
Cost of materials	5,509,298	170,946	5,978,070
Value of products	12,354,116	323,336	13,354,766

The capital invested in land, buildings, plants, etc., for the Dominion for 1915 is as follows:—

Land, buildings and fixtures	\$ 9,151,212
Machinery and tools	6,263,089
Materials in stock, fuel, etc.	9,718,887
Cash accounts and bills receivable, etc.	34,395,903
Total capital	59,529,091
Rent of land, buildings and machinery	9,550

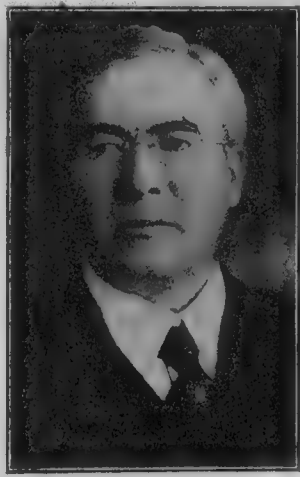
The value of exports of agricultural implements for the fiscal year ending March, 1918, amounted to \$4,792,757, comparing with \$3,576,124 for the fiscal year ending March, 1917, and \$7,219,520 for 1914, which was the largest amount reached in the history of the industry. It will be seen that for the period immediately preceding the war, slightly more than 50 per cent. of the farm implements produced in Canada were exported. The largest plants are situated in Toronto, Hamilton, Brantford and Woodstock.

## Effect of the War on the Industry

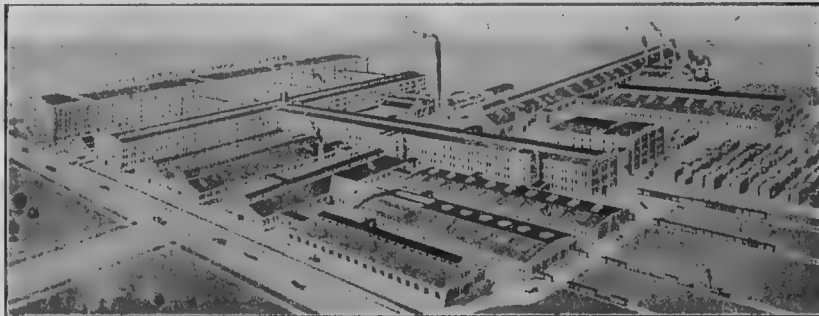
Problems of magnitude had to be dealt with during the war. Labor became more and more scarce, and working forces were perforce reduced. Wages were increased from 60 to 100 per cent. with the larger amount

applying to unskilled workers. The average increase was close to 70 per cent. Workmen showed a tendency to shift about since there was considerable competition for their services. Raw materials were secured with difficulty, and future needs had to be provided for several months further in advance than under ordinary conditions. Thus, manufacturers are entering upon 1919 trade with a full supply of raw materials for the entire 12 months, bought at the peak prices of 1918. They have no hesitation in asserting that there will be no reduction in prices of the finished products, but that on the contrary there will be an advance of five per cent., since present stocks of materials are more costly than those that entered into the manufacture of the goods made in 1918.

Continued on Page 79



Thomas Findlay,  
President and General Manager,  
Massey-Harris Company Limited.



The Factories of the Cockshutt Plow Company Limited, Brantford, Ont.

smaller amount with Chile. Demands of these countries were much larger than could be satisfied during the war, and there appears to be little doubt but that Canada can compete with the other exporting nations in this field. The removal of the barriers of transportation will witness a considerable expansion in this as in other fields.

## Tendency Toward Concentration

In the last few years the tendency of the agricultural implement industry has been towards concentration. This has been of advantage in solving the problems of financing and marketing in connection with the export business. Whereas 77 establishments were shown by the census of 1910, the tabulation for 1915 showed that the number had been reduced to 48. This indicates combination rather than dropping out



The Toronto Factories of the Massey-Harris Company Limited. Factories are Also Operated at Brantford and Woodstock, Ont.



# A Solid Wall of Steel

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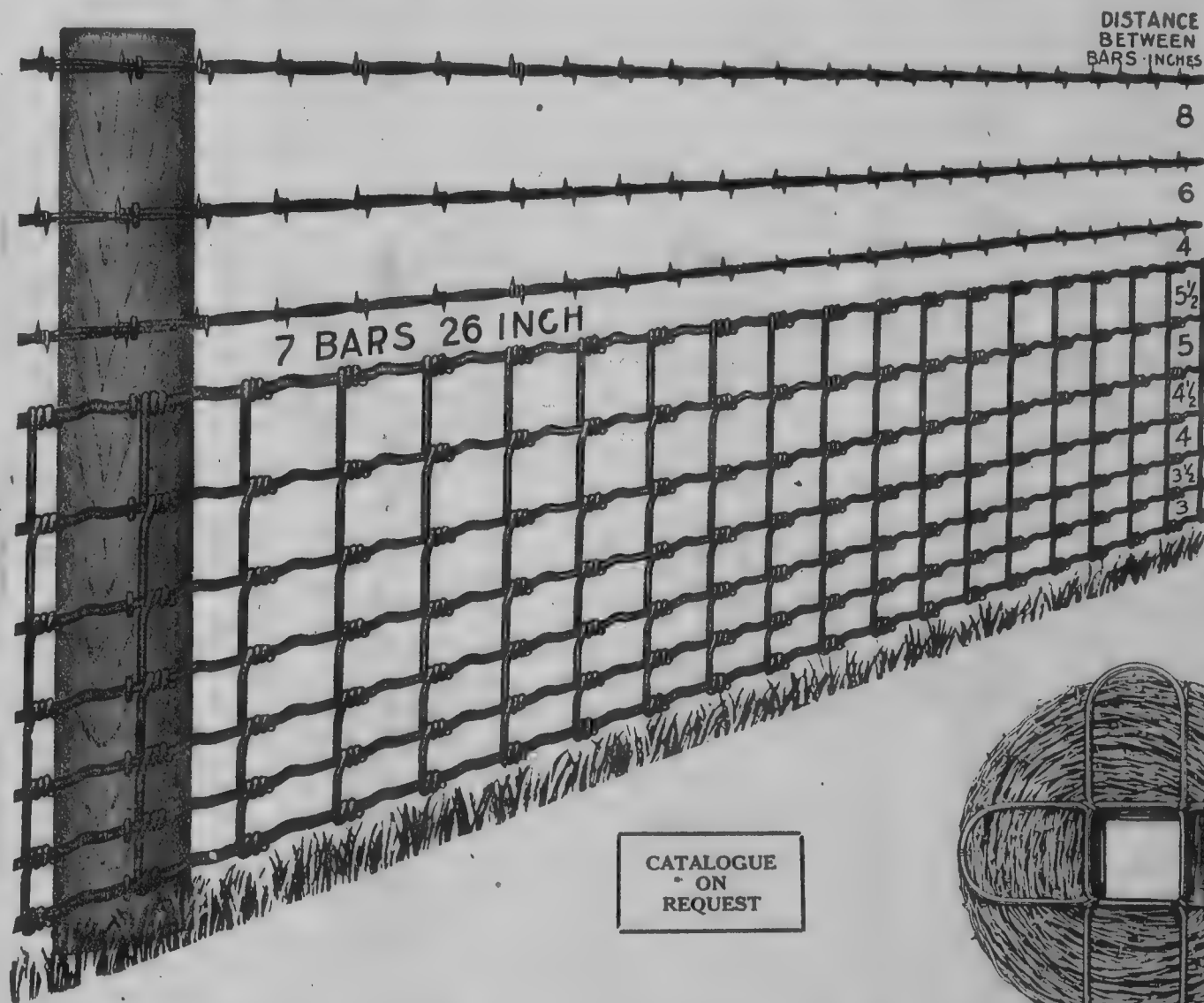
**“American”  
Fence**

**and**

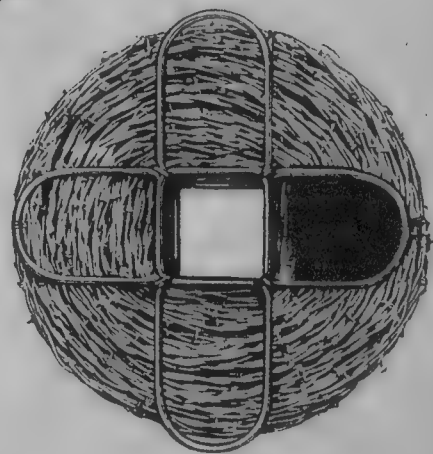
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# United Farmers of Alberta

## Hints for Canvassers

When canvassing for new members:—  
1. Believe enthusiastically in your proposition. This is absolutely essential to success.

2. Be absolutely honest with the people you approach. Make no claims which are not fully substantiated.

3. If you meet objections or criticisms which you cannot answer, drop a line regarding them to the Central office.

4. Aim primarily to win interest and sympathy and secondarily membership and co-operation.

5. Keep the ideal high. We are not a dollar-grabbing institution. We exist for the betterment of community life and defence of the interests of the people on the land.

6. Be able to answer the question "What do I get out of it for the \$2.00 I put in." One gets out of it the opportunity to co-operate with a great living organization in serving the community, the cause of rural life generally and the Canadian democracy at large.

7. Emphasize the value to the individual and to the family of being an integral part of the most active and progressive organization in the country.

### Whom to Invite

Always keep in mind that the movement aims to include the whole rural population.

Make especial effort to enlist the young. Inspire them with the ideals of service and co-operation and optimism and progress. If there is special capacity for service, intelligence, training, literary, musical or platform ability in any quarter, win that for the cause.

Do not pass by anyone who is genuinely interested in the progress of the farmers' movement. Whether the persons interests are with the farmers or are liable to be opposed to the farmers should be the test for membership.

## General Remarks on Making a Success of Your Local

Have something in your program that will interest the different tastes of your members.

Keep as many of your members employed as possible by the formation of different committees with a definite work for which they are responsible. Children are always happy and good when they have a job for which they are responsible; men and women are only grown-up children, and the way to keep the interest of your members is to keep them busy.

Make a point of beginning and ending your meetings on time.

Do not let one or two members monopolize the talking at a meeting. Endeavor to draw out the most silent. See that every one has a square deal.

Try to make your place of meeting as comfortable and attractive as possible with the means at your disposal.

Comfort, warmth, cleanliness, good ventilation go a long way towards making a meeting a success.

Never allow personal prejudices, personal quarrels, personal likes and dislikes to be brought into or discussed in the local.

Do not expect Central to do everything for you. Practice self help.

Put on a special membership campaign occasionally and see that non-members are personally urged to join.

Use the telephone and automobile—they can be of great service in making your local a success.

## U.F.A. Sunday, June 15

U.F.A. Sunday will be held this year on June 15, the third Sunday in June. The date has been changed from May, owing to the fact that in some districts seeding was not completed, and also owing to the fact that some times the May conflict with some of the religious festivals of the district.

Make their arrangements early, and wherever possible, have their own speakers.

1,000

Receipt of the  
ment of the

## Conducted Officially for the United Farmers of Alberta by the Secretary

H. Higginbotham, Calgary, Alta.

Willow Hollow Co-operative Association, Limited, for 1918, which shows a very satisfactory report. Since starting business the association has purchased goods to the value of \$51,974, on which purchasers have been saved approximately \$3,500. There are 57 shareholders in the association; and there are over 100 non-shareholders who have been saved approximately \$5,000 by purchasing through the association. "We want these non-shareholders to take out a \$10.00 share and help the association along."—Wm. Halsall, secretary, Killam.

## Aldersyde Reviving

Wm. H. Crouse, secretary of the Aldersyde local, recently reported that their meetings have been very slow and people are not showing the interest they should. Two of the members are now trying to get the members interested and create more interest, and have met with success. They gave an address on the U.F.A., the elevator and the benefits to be derived therefrom, which was much appreciated by those present. Arrangements are being made to meet twice a month, so that there will not be so much time in which to lose interest between meetings.

## Wilkinson Reorganized

A meeting was called in the Irvine district recently in the interests of the farmers generally.

George Mackie acted as chairman, and Carl Beny, as secretary. C. S. Pringle, M.P.P., explained the Seed Grain Act to the entire satisfaction of the farmers generally. W. Cousins, Medicine Hat, gave an address on good roads and road-making, and also spoke on U.F.A. work in a very able manner. The meeting was then turned into a U.F.A. meeting, when the Wilkinson local was re-organized, 21 members being enrolled and officers elected. It was resolved that the Town Council of Irvine be asked to grant permission to hold meetings in the Town Hall every third Saturday of each month at 2 p.m.

## Round-up at Muhlbach

"I have much pleasure in sending you Bank Draft for \$31, being your share from the proceeds of the annual 'round-up.' We now have 40 members, but won't be satisfied until we have every farmer in the district enrolled.

Our meetings have been fairly well attended this winter and have been held twice monthly.

We hope to be able to save our members a few dollars on buying seed and feed oats co-operatively this spring."—R. V. Bamber, secretary, Mount Pleasant local, Muhlbach, Alta.

## Exchange Visit

At a meeting of Spondon local, held recently, officers were elected for the current year as follows: President, Harry Orego; vice-president, Chas. Gottschalk; secretary-treasurer, F. W. Fleming. Directors: I. Swinson, Alf. Johnson, Angus McFarlane, Geo. Howie, Andrew Kleinknecht.

A splendid address was delivered by Mr. Cameron, of Youngstown, on the principles of the U.F.A. and the Hail Insurance Act. It was decided to pay a fraternal visit to the Kirkpatrick local.

## Far From Railway

Some years ago we started a local of the U.F.A., at Elkpoint, but owing to lack of interest amongst the farmers here, coupled with the distance from the railroad (50 miles), and this community being in the pioneer and homesteading stage, little or nothing could be done in the way of co-operative buying and selling, so we had to disband.

However, a revival seems to have set in, and I have been asked by quite a

few to get things going again, as so many have been "deceived" by cattle buyers. They now feel it is high time we took the co-operative selling, at any rate, into our own hands, and at the same time, get into line with the farmers' movement, which they now realize is going to be a potent factor in the shaping of legislation favorable to the farmers, which is much overdue.—Albert Whitworth, secretary, Elkpoint local, U.F.A., Elkpoint, Alta.

## Trenville Comes to Life

The farmers in the Trenville district held a meeting in the school-house for the purpose of trying to re-organize the Trenville local U.F.A., which has been dead for nearly a year. The meeting was not largely attended, but ten members enrolled.

Officers were elected for the year, and different methods were discussed as to what would be best to create an interest in the local and keep it alive.—Wm. C. McKay, secretary, Trenville local, Lonsana, Alta.

## Pandora a Winner

At the regular meeting of the Pandora local, the Hail Insurance Act was debated before a large crowd, and at the conclusion of the debate the meeting voted unanimously in favor of the act.

Although they had a membership of 111 last year, Joseph Gerding, secretary, states that they are looking forward to a considerable increase and an exceptional year for the Pandora local, which, he says, should be a winner, if they get a fair crop.

## On the Frontier

"You must understand, we are in a very new country; it was settled only about four years ago. Most of the settlers came in only one or two years ago, so every one has the excuse that he is too busy to come to the meeting. They have to put up shacks, barns, have to make fences, dig wells, break land, etc. It is hard to get the people together for the ideals of the U.F.A. (unless we have a dance after the meeting). They ask, first, 'What can the U.F.A. do for us?' When we had our meeting about ordering binder twine from the U.G.G., every member turned out to that meeting. We have 27 members now."—Dr. F. A. Sherrer, secretary, Last Lake local, Last Lake, Alta.

## U.F.A. Briefs

"Our secretary is a dead one, and simply accepts office from year to year, and then retires to rest for that year. We never, from year's start to year's end, hear a communication of any sort." Is this your local?

A local has been formed at Ohaton, to be known as Heather Brae, location, Sec. 16, Twp. 45, Range 19, West of the 4th Meridian. Robt. Gibb has been appointed president, and W. F. Marleau, Ohaton, secretary.

The Stavely local is endeavoring to get the twice daily train service on the Calgary-Macleod line, discontinued as a war-time economy, re-started. They will have the support of other locals on this line.

Lynn Bloom, secretary of the Hardisty local, reports that owing to the organization of two or three locals in the immediate vicinity, they will not be able to show such a large membership this year, but that the total membership of the U.F.A. in their district should be increased. A picnic and sports day is being planned for June.

"Would like to say that our local which has been sleeping for the past year has become very much awake. At the annual meeting, which was delayed on account of the 'flu' situation,

20 farmers were present. The local re-organized with 14 paid-up members and prospects of from ten to 20 more, which I consider very good. The farmers are awakening to their duty to themselves."—C. S. LaRoy, secretary, Twinning local.

"Our local is very active and we have invitations to go and help organize new locals which we are going to do."—W. W. Sim, president, Lone Butte local.

"Holding meetings every two weeks. Things are booming."—Walter N. Vivian, secretary, Clairmont local.

F. W. Smith, director for Victoria constituency, attended a meeting of the Ryley local, and reports that the local is in a very healthy state. He also visited the Bashaw local on the following day and states that the prospects for this local look good.

Gough Lake local has changed its meeting place to Leo, where the post-office and store are situated. In future the local will be known as Leo. It is thought that by this move better headway will be made in the organization, as it is better centralized and consequently there will be a better attendance at the meetings. E. W. Langford, secretary, hopes for a strong and prosperous local this year.

H. E. Chickering, secretary of the newly-formed Langford local reports 11 members were enrolled at the organization meeting, and it is expected several more will join next meeting.

"We held our last meeting February 8. There was a good turn out of members to hear the report of our delegate to the convention. He gave us a good idea of what was done there and was pleased with what he saw and heard at the convention."—A. H. Scarlett, Compeer local.

It was unanimously decided to organize a local of the U.F.A. at a meeting held for that purpose in Creslow school-house. Thirty members were enrolled and it is expected more will join at the next meeting. The name chosen for the local is "Creslow," to which the No. 84 has been allotted. J. P. Paterson was chosen as secretary.

At a meeting of the Standard local, after the reading of a paper on "War Profiteering," and some discussion on same, it was moved and carried unanimously that all Canadian-made goods should be removed from the shelves of the dealers, as goods shipped across the line would allow us some revenue for our government instead of the manufacturers here putting enormous profits in their own pockets.

At our last regular meeting there were 13 members present and a large crowd of non-members. Many things were discussed of interest to all, among them being the appointment of a Brand Reader, and the need of a road being put through the township. The councillor representing this district was present and reported that he thought our request was within our rights.—Jas. McDonald, secretary, Moyerton local.

We are anxious to procure the membership of all the farmers in the district and your seed grain certificates have been quite a good help in bringing the U.F.A. to their notice in the past, and this year there will be a larger call for them, as we all need seed shipped in.—Wm. E. Hampshire, secretary, Prairie Parl local, Killam, Alta.

We have been canvassing the locality for new members and have been quite successful in enlisting the co-operation of most of the people in the district. A house-to-house canvass gives good results.—W. S. Giffen, secretary, W. Lethbridge local, Lethbridge, Alta.

The local is 73 strong already, with quite a few prospects in sight.—Thos. H. Noad, secretary, Stonelaw local, Monitor, Alta.



# A Great Canadian Factory Producing Lightning-proof Roofing and Siding for Your House and Farm Buildings



**T**HE Western grain grower who invests capital in land, and then applies the labor of himself and others to produce food products is admittedly a national asset. In the same way, the manufacturer who invests capital in costly buildings and machinery, and who employs labor in the production of manufactured goods, is also a national asset.

There is no real antagonism between the Western farmer and the Eastern manufacturer. Both are essential to the well-being of Canada; both take risks with their money; both contribute to the nation's prosperity; both exercise intelligent enterprise in the creation of wealth; and each is entitled to the respect of the other.

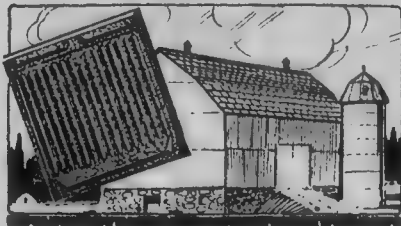
Illustrated here is a bird's-eye view of one of the biggest sheet metal plants in the British Empire—a Canadian plant, founded in 1861 by the late George H. Pedlar, a Canadian citizen. From small beginnings

this great factory has been steadily developed by enterprising methods and the production of dependable goods, until, at the present time, it normally employs several hundred persons at good wages.

Among our present employees are many who have served overseas. These men were promised, before enlisting, that they would be reinstated in their former positions when they returned, and notwithstanding their physical condition we are adhering strictly to the promises made. All classes should co-operate in helping the manufacturer of the country to keep their factories running, so that the menace of unemployment may be eliminated. The farmer, no less than the city dweller, is interested in maintaining industrial activity because the industrial centres of Canada provide the most important market for the products of the farm.

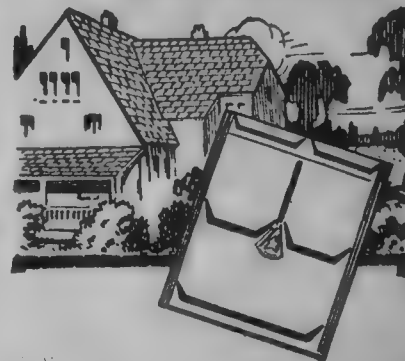
Among the lines produced by this company the following may be mentioned as being of particular interest to farmers:

## PEDLAR'S "GEORGE" SHINGLES

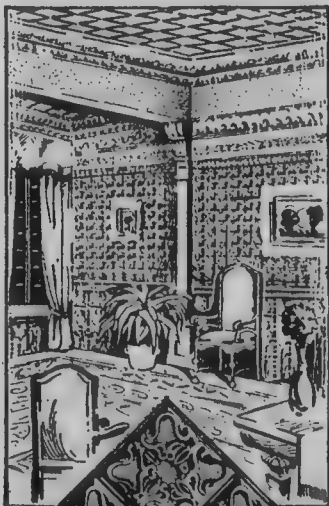


A big, galvanised steel shingle. 24x24 inches in size, constructed with a special locking device at each side where the shingles join on the roof. Any roof shingled with them is absolutely weather-tight and fireproof. When properly grounded it is also impervious to lightning. Any handy man can shingle a building with Pedlar's George Shingles, the only tools required being a hammer and a pair of tinner's snips.

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This Shingle has the same locking device as the George Shingle, and is, for all practical purposes, the same throughout, with the exception of the design. In design, as the illustration shows, the Oshawa Shingle is handsomer, because it is intended especially for use on dwelling houses or other than utility buildings.



L'art  
Noveau

Panel  
No. 1713

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Write us, mentioning this publication, for Special Booklet, concerning any Pedlar Product in which you may be interested. Your enquiry will have prompt attention.

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(Established 1861)

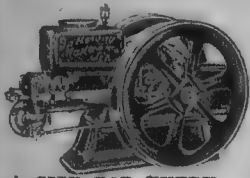
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farm is not complete without this outfit.  
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The simple, powerful Gilson Engine—dominant in  
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**Great West Fireworks Co.**  
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OF CANADA LIMITED

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Shear with a machine and not only get 15  
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a smooth, even stubble that grows more wool  
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# Manitoba Grain Growers

Conducted Officially for the Manitoba Grain Growers'  
Association by the Secretary

W. R. Wood, 306 Bank of Hamilton Bldg., Winnipeg

### Going Right To You

**A**S this article goes to press, the  
1919 Year Books are being sent  
out. Each member is entitled to  
a Year Book. They are intended  
to keep our members in touch  
with the work throughout the province  
and to help in securing that each shall  
take part in furthering that work as  
he may have opportunity. See that you  
get your Year Book from the secretary  
of your association, and then see how  
much help you can get from it for the  
service you wish to render to the  
movement.

The Year Book does not contain the  
Constitution. That will be printed sep-  
arately, and issued in a few weeks to  
the secretaries of local associations for  
their members.

### Grain Growers and Repatriation

The board of directors recently asked  
the local associations to appoint from  
among their members committees, whose  
duty it would be to watch for oppor-  
tunities of assisting any returned sol-  
diers who might have come into the  
neighborhood. Our people are profound-  
ly concerned for the welfare of our  
returned men, and the reports of the  
appointment of these committees are  
now coming in to the Central office.  
It is hoped and expected that this im-  
portant work will not be neglected by  
any association, but that fullest ad-  
vantage may be taken of the oppor-  
tunity of service thus afforded. Keep  
the reports coming.

The Central office, on its part, holds  
itself in readiness to second in every  
possible way these local efforts. If it  
can be made the communicating medium  
between the farmers who may be in a  
position to assist a returned man and  
the men themselves, that service will  
be most cheerfully and fully rendered.  
It is recognized that now, as well as the  
day of battle, is a time when the Em-  
pire expects that every man shall do  
his duty.

### They're Doing It Now

It has been urged as a reason for  
not asking for a fixed price for the  
1919 wheat crop that opposing inter-  
ests would use such a course as an  
argument for the continuance, and pos-  
sibly the increase, of their special  
privilege. Some people have been very  
sceptical about that happening. An in-  
cident which occurred in Winnipeg re-  
cently shows that it is being used by  
protectionists at the present time in  
the way indicated.

At a dinner, given by the Board of  
Trade, on the evening of February 28,  
C. F. Roland, the Western secretary of  
the Canadian Reconstruction Associa-  
tion, was discussing the fixed price, and  
the situation that would arise if the  
market price fell below the fixed price,  
when the government would find itself  
under obligation to supplement the  
price the farmer would be receiving  
by a bonus on every bushel. Then he  
added the significant remark: "If they  
can do that for wheat, why can't they  
do the same for other industries?"  
Why indeed?

### Christie Charges Answered

The Portage district convention, held  
in Portage la Prairie, on February 28,  
had an attendance of nearly 400 grain  
growers and their wives, and was the  
largest ever held in the district. No  
more successful district convention was  
ever held in the Province. Reports from  
local secretaries showed several new  
associations and a very large increase  
in membership in the old ones. Never  
before has there been so much activity  
among the associations in the Portage  
district.

The afternoon session of the conven-  
tion was devoted largely to a discus-  
sion of terminal elevator tariffs and

overages. W. J. Christie, a well-known  
Winnipeg real estate broker and finan-  
cier, who has written several letters  
to the press concerning this subject,  
was present as one of the several dele-  
gates from the Elm Bank local, and  
spoke for almost an hour in support of  
a resolution prepared by himself and  
brought in by the Elm Bank associa-  
tion. In his address, Mr. Christie re-  
peated his charges against the United  
Grain Growers Limited, and added some  
new ones against one of the officials  
of the company. He declared that the  
farmers were the backbone of the com-  
pany, and told them of the interest he  
had always taken in the Grain Growers'  
association and its wonderful power for  
good, if it were not led astray by out-  
side influences. He urged that a special  
committee be appointed to investigate  
the matter of terminal elevator tariffs  
and overages, instead of leaving it to  
the regularly constituted representa-  
tives of the organized farmers. He  
urged particularly that no representa-  
tive of the United Grain Growers  
Limited be allowed to have anything  
to do with the Committee.

### Farmers Not Fooled

J. R. Murray, of the United Grain  
Growers, replied to Mr. Christie, and  
went fully into all the facts of the  
matter, giving many facts which Mr.  
Christie had apparently consistently  
avoided. After a brief reply from Mr.  
Christie, the delegate from Elm Bank  
association, who introduced the resolu-  
tion, asked permission to withdraw it.  
Mr. Murray, however, urged that the  
convention vote upon the resolution,  
one way or the other. Upon the vote  
being taken, the resolution was defeated  
by an overwhelming majority. Only  
four delegates and those from the Elm  
Bank Association voted for the resolu-  
tion. Mr. Christie left for his home  
in Winnipeg on the first train.

During the course of his remarks,  
Mr. Christie made some slighting re-  
marks about The Grain Growers' Guide,  
and explained that The Guide had not  
published a letter which he had sent to  
it. G. F. Chipman, editor of The Guide,  
was present at the meeting, and was  
asked by a delegate why he did not  
publish Mr. Christie's letter. Mr. Chip-  
man said that he regarded both Mr.  
Christie's attack and The Winnipeg  
Telegram attack purely as political  
dodges, and that The Guide would  
answer The Telegram when the time  
was ripe.

### Against Fixed Prices

At the evening session there was con-  
siderable discussion upon a resolution,  
asking for a fixed price on wheat. It  
was finally laid on the table by a large  
majority vote. Addresses were de-  
livered by Miss Mary P. McCallum,  
of The Grain Growers' Guide, and by  
William Ivens, editor of the Labor  
News, of Winnipeg. Short addresses  
were also given by Mr. McQuay, of  
Dauphin; A. J. M. Poole, of Kelwood;  
D. G. McKenzie, of Brandon; and Ben  
Richardson, of Portage.

Colin H. Burnell, who has been presi-  
dent of the Portage district association  
for the past three years, refused  
another nomination, because of his ap-  
pointment as field secretary for the  
association for the province. Ben  
Richardson, who has been secretary  
during the three years, was nominated  
and elected as president, the new secre-  
tary to be appointed by the board of  
directors. Josiah Bennett, of Pine  
Creek, was elected vice-president, and  
the following as directors: J. Barrett,  
Bagot; Mrs. E. Muir, High Bluff,  
Mrs. R. J. Caskey, Longburn.

### Boissevain Resolution

#### An Explanation

The following letter has come to

hand from F. Howell, of Boissevain:—  
"Mr. W. R. Wood: Will you please  
state how you got the information that  
the Boissevain Grain Growers' Associa-  
tion passed a resolution asking for a  
fixed price for wheat, as reported in  
The Guide, of February 26.

"I have attended every meeting of  
this association for the past year, and  
know that no such resolution has ever  
been presented. The situation is bad  
enough without misrepresentation, but  
I doubt if a resolution condemning the  
action of the Brandon convention on  
this subject could be carried in any  
association in the Souris district, a  
number have already formally expressed  
their approval. The Turtle Mountain Ag-  
ricultural Society passed such a resolu-  
tion, and the fact that their secretary  
is also the G.G. secretary, may account  
for the mistake; but why the report  
was sent to you is something that re-  
quires an explanation.

"However, as a rule, we cannot ex-  
pect right decisions in cases where the  
parties most deeply interested in the  
result sit in judgment, and it is be-  
cause the grain growers have hitherto  
proved to be the exception that their  
opinions have carried such weight. A  
few breaks like that in Saskatchewan,  
however, will utterly ruin our reputa-  
tion for disinterested service. I am  
satisfied that the more fully this matter  
is considered, the surer we will be that  
the Manitoba and Alberta conventions,  
by remaining true to the principles we  
have so long advocated, have acted in  
the best interests of all concerned. We  
do not yet believe our cause so hopeless  
that we are ready to betray it for a  
consideration of very doubtful value,  
with no assurance that we will even get  
the price.—F. Howell."

In reply to the above, and in explan-  
ation of the situation, I have to say  
that the resolution referred to and  
printed on the Manitoba page of Feb-  
ruary 26, was received, with the fol-  
lowing note, from Mr. Brown, of  
Boissevain:—

"Boissevain, January 25, 1919.

"The Editor of The Grain Growers'  
Guide. Dear Sir: The following resolu-  
tion was passed at a meeting of our  
society, with instructions to forward  
same to the ministers of agriculture  
and the press.—Yours respectfully, Ed.  
Brown."

Not knowing that Mr. Brown was  
secretary of an agricultural society I  
naturally concluded that "our society"  
meant the local grain growers' associa-  
tion. In looking up the file I find that  
Mr. Brown's letter was on the Turtle  
Mountain Agricultural Society's paper,  
but as we receive grain growers' letters  
under every variety of letterhead, that  
did not save me from the mistake. I  
offer cordial apologies to the Boissevain  
Grain Growers' Association and to any  
others who may feel themselves ag-  
grieved by the slip.—W. R. Wood.

### Field Notes

Roundthwaite Association has ob-  
tained comfortable quarters for its  
meetings and for community use, by  
turning an unused house into a Grain  
Growers' Hall.

Watch Salem branch grow! The mem-  
bership in 1917 was 11; in 1918, 24;  
now it is 70. Next!

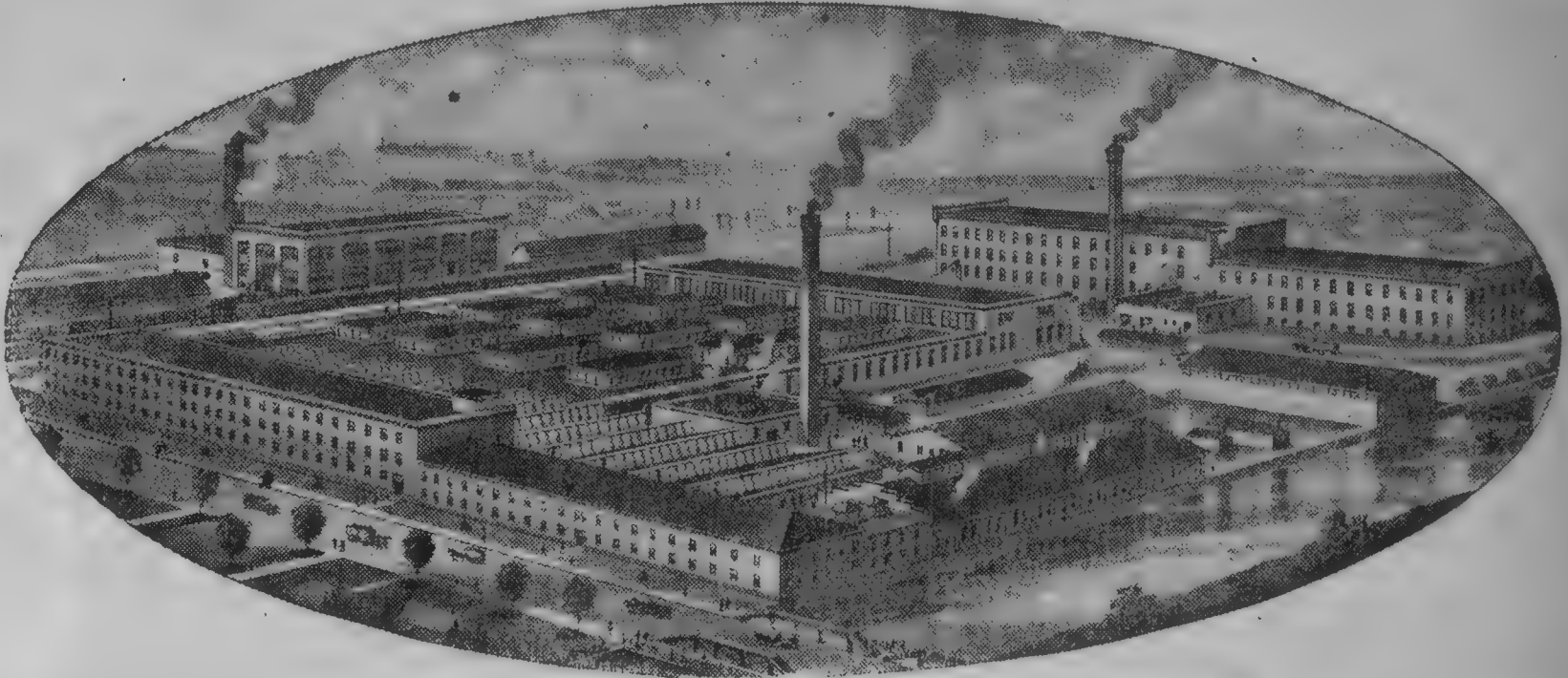
Some convention at Portage. Had to  
move for larger quarters. Murray is  
reported to have delivered all the  
"overages" asked for. Chipman struck  
straight from the shoulder on political  
action. Best wishes to the new presi-  
dent, Big Ben. He'll strike every hour  
all right.

Oakville association has sustained a  
severe loss in the death of its honored  
president, J. D. Whitmore.

Portage la Prairie, thanks to the fore-  
sight and practical initiative of their  
rural council, will have an up-to-date  
community building, by the purchase of  
Bosin House. It will contain a rest  
room, public hall, library, etc.



Great enterprise is being shown by the Guelph Carpet and Worsted Spinning Mills Ltd., one of the largest Textile industries in Canada



Particularly, since the amalgamation, and under the new management, this firm has made rapid progress and many improvements are noticeable. Recently, new offices and show-rooms were built on an elaborate scale, the furnishings in this department being very much up-to-date.

The last word is the decision to erect a large extension on the Worsted Spinning Department, plans having just been passed for a three-story red-brick building, work on same to commence at once.

The cost of the new plant and machinery will be \$300,000, and will be in operation this coming fall. The present plant in full operation employs

400, whilst this new development will increase the pay-roll about 50 per cent., making this institution the premier mills of its kind in the country.

Besides manufacturing Woolen and Worsted Yarns of all grades and qualities on a large scale, used for all purposes by the numerous knitting mills in the Dominion, they are extensive manufacturers of floor coverings, well and favorably known throughout the entire universe, many of their Tapestry, Velvet, Brussels and Wilton products being household names.

The production of this company last year exceeded \$2,000,000, this, in the face of labor shortage.

**The Guelph Carpet & Worsted Spinning Mills Ltd., Guelph, Ont.**

# HAIL

You can get Municipal Hail Insurance because the organized farmers worked for it.

Now through the organized farmers you can get the additional Hail Insurance you need.

United Grain Growers Securities Company Limited are general agents, writing policies in the

**Car and General Insurance Corporation Limited**  
OF LONDON, ENGLAND

Policies issued backed by funds in excess of \$47,000,000

Agents everywhere, but no agent is working for the organized farmers who cannot give you a policy in that company.

Write for information—

INSURANCE DEPARTMENT

**UNITED GRAIN GROWERS**  
SECURITIES COMPANY, LTD.

WINNIPEG

SASKATOON

CALGARY



# Saskatchewan Grain Growers

## District Conventions

**O**WING to the "flu" epidemic, the district conventions as previously announced, were not held last year. Arrangements therefore were made for holding the same during the convention week; with the result that the whole of the Thursday morning session was devoted to this work.

### District No. 1

The convention for District No. 1, was held in the City Hall Auditorium, under the chairmanship of Director W. H. Beesley, of Belbeck; with about 100 delegates in attendance. After the appointment of Thos. Teare, of Marquis, as district secretary, the list of locals for the district was read, and the delegates present answered for their respective locals.

The retiring directors, W. H. Beesley and Mrs. Morgan, having addressed the meeting, Mr. Elliot, of Belbeck, took the chair and nominations being called for district director for 1919-20, the following were nominated: Dr. T. M. Morgan, Aquadell; Thomas Teare, Marquis; W. H. Beesley, Belbeck. Messrs. D. Bryce, A. McKenzie and — Elliot, were appointed scrutineers, and subsequently reported that a majority of the votes had been recorded in favor of Captain Morgan. Thomas Teare and W. H. Beesley were nominated for second choice and after the ballot had been taken the scrutineers declared Thomas Teare elected.

The ladies nominated for lady director were Mrs. Morgan and Miss Pebble. After a ballot had been taken the secretary declared Mrs. Morgan elected.

### Sub-Organizers Elected

The male sub-organizers were appointed as follows: District 1, Outlook to Hawarden, James Gifford, Glenside; District 2, Hawarden to Elbow, A. K. Meisenheimer, Strongfield; District 3, Elbow to Tugaskie, R. H. Pebble, Tugaskie; District 4, Tugaskie to Keeler, George Emmons, Eyebrow; District 5, Keeler to Moose Jaw, Thomas Teare, Marquis; District 6, G.T.P. Moose Jaw to Ekbank, Arthur Daurie, Ekbank; District 7, Ekbank to Central Butte, M. Holtzlander; District 8, Central Butte to River, John McDuff, Lawson; District 9, C.P.R. Moose Jaw to Mortlach, Alfred Green, Boharm; District 10, Mortlach to Morse, Joseph Nixon, Mortlach.

The women sub-organizers were elected as follows: District 1, Mrs. Hendrickson, Outlook; District 2, Mrs. Martin, Elbow; District 3, Miss Pebble, Tugaskie; District 4, Mrs. Haight, Keeler; District 5, Mrs. H. Clyne, Belbeck; Districts 6 and 7, no appointments; District 8, Mrs. Ruid, Riverhurst; District 9, Mrs. J. H. Browbecker, Moose Jaw; District 10, Mrs. Chrystal, Mortlach.

It was moved by W. H. Beesley, seconded by Mr. Bryce and unanimously adopted that each delegate pledge themselves to return to their respective locals and organize for the purpose of securing their share in raising the \$500,000 required by the Central to strengthen their trading operations.

### District No. 4

District No. 4 held its annual convention on Thursday morning of the convention week, in the auditorium of the Y.M.C.A., the room being filled to capacity with delegates and visitors.

The meeting was presided over by District Director R. M. Johnson, of Pasqua; who explained the reason for the change from previous years, owing to the "flu" epidemic. During the reading of his report, Mr. Johnson expressed his pleasure at being able to report an increased membership and with one or two exceptions a forward movement throughout the whole of his directorate. Mr. Johnson also referred to the Canadian Council of Agriculture as a clearing house of ideas, and from the discussion which followed it was deduced that the Canadian Council of Agriculture obtained its material from the people, through the directors and that after revision and framing these were returned to the people as "The Farmers' Platform."

Mr. Hall, of Moosbank, made some salient remarks about the people hav-

## Conducted Officially for the Saskatchewan Grain Growers' Association by the Secretary

J. B. Musselman, Regina, Sask.

ing a full voice in all matters; which received hearty approval. The report was unanimously adopted.

### Report from Women's Section

After a short discussion of the reasons for locals falling off, Mrs. McNeal gave her report on the women's section. Much good work has been done; but much remains to be done. A strong and effective local was reported to have been formed in Regina. It was urged that it should be everyone's object to work in harmony, and men should see that women had a chance to get interested. Farmers should avail themselves of all the facilities for lightening women's work.

Mr. Lennox advocated that locals should do all they can to establish Women's Sections, as he considered them a great acquisition. Mr. Doutres suggested that women organizers should be paid; but it was explained that grants amounting to the sum of \$1,200 had been made last year for this purpose.

Mr. Johnson having been called away Mr. Evans took the chair and commenced calling attention to an editorial in the morning paper, in which it was divulged that contracts by which Canada would furnish credits for \$25,000,000 to France and Roumania were being allotted; one-fifth for raw material, one-fifth for foodstuffs and three-fifths for manufacturing materials. This was considered unjust and as affording a good reason why farmers should assert themselves; seeing there was thereby involved the retention of the tariff. Everything was in the hands of wholesalers, and those in turn were at the mercy of the manufacturers. It was clearly the duty of the Grain Growers' Association to free the country of all patronage dividends.

### A Note of Warning

Mr. Hall, or Ardill, sounded a note of warning against dependence on sentiment and advocated care in purchasing, until things were normal. While sentiment was all right, finance must stand alone. Success depended upon good management and patronage.

Cancellation of orders for binder twine was discussed and the abolition of such was recommended, but Mr. Johnson showed that the executive's objective was to help the members; so that in the event of a poor crop they were ready to relieve the farmers from any contract he was unable to keep, through misfortunes over which he had no control. The Central had carried the locals to the extent of \$120,000 and even \$300,000 during the postal strike. There was a request from the people that local stores be managed from the Central. That this movement was approved was shown by the ready response of \$80,000 to an appeal for \$100,000. Mr. Harewood suggested that each delegate canvass locals for shares in the issue of debentures by the Central.

### Election of Directors

In the election of directors, which followed, E. M. Johnson, of Pasqua, was re-elected and Mrs. Ida McNeal, of Expanse, was also re-elected. For the office of alternative director there were three nominations, viz: Mr. Harewood, of Expanse; Mr. Watson, Avonlea and Mr. Cooper. Following a ballot Mr. Cooper was declared elected.

The following sub-organizers were then selected: E. B. Hunter, Filmore; C. C. Downs, Lewvan; Mr. Murray, Yellow Grass; Mr. Lennox, Hearn; Mr. Harewood, Expanse; and Mr. Watson, Avonlea.

### District No. 8

District No. 8 held its annual convention in the Regina Y.M.C.A. building on Thursday morning of convention week, with District Director John McNaughtan presiding, and C. Cherry, of Saskatoon, as secretary.

Following the reading of the minutes for 1917, Director John McNaughtan presented his report, which, on motion, was unanimously adopted and recorded on the minutes.

### Election of District Director

Nominations for district director were then called for and the following were nominated: John Holmes, Asquith; Harry Marsh, Herschel, and J. C. Cherry, of Saskatoon. Following a vote by ballot, the scrutineers declared Harry Marsh elected.

The following sub-organizers were also appointed: H. B. Davis, Vanseoy; J. Holmes, Asquith; Mr. Chambers, Binloiew; C. W. Carrol, Grandora; W. Louch, Delisle; H. Mainland, Keppel; L. C. Pepper, Herschel; Robert Marris, Biggar; W. J. Muir, Traynor; Mrs. Sanville, Smilie; W. L. Kirkpatrick, Saskatoon; Charles, Agar, Floral; J. C. Cherry was appointed district secretary by acclamation.

### Support Political Platform

The following resolutions were unanimously adopted: "Resolved, that this convention of District No. 6, of the Saskatchewan Grain Growers' Association, in Regina, Thursday, February 20, places itself emphatically on record, as supporting the federal platform of the Canadian Council of Agriculture, with such amendments as may be mutually agreed upon by the representatives of the council, the Dominion Labor party, and the Great War Veterans' association. We further desire to declare that the director-elect of District No. 6 shall hold himself directly responsible to this convention, in carrying out the terms of the above resolution, in his position on the Central board and by all legitimate means possible during his term of office. The resolution was moved by Will James Thompson, of Saskatoon, and seconded by G. D. Wilge, of Valley Centre.

### Thanks to Mr. McNaughtan

The following resolution, which was unanimously adopted, was moved by Will James Thompson, of Saskatoon, and seconded by John Holmes, of Asquith: "Resolved, that this convention of District No. 6 places on record its hearty appreciation of John McNaughtan, of Harris, for his untiring efforts as district director, and for his untiring efforts to make it possible to have a political platform, which farmers, as a class, can wholeheartedly support. We further desire to extend both Mr. and Mrs. McNaughtan the best wishes of this convention for an increasing measure of happiness and prosperity."

### District No. 7

With William Penny, district director, presiding, the annual convention of District No. 7 was held in the Metropolitan Church, on Thursday morning. Following the opening of the proceedings Dr. Flatt was called upon to preside and George A. Stephens was selected as secretary.

After the reading of the minutes the meeting proceeded to select the district director. Mr. Penny, the retiring director intimated that, owing to unusual conditions, he had no definite report to present. The following were nominated as candidates for the office: William Penny, H. C. Fleming, Captain Dr. Flatt. Mr. Fleming having withdrawn, on a vote being taken Dr. Flatt was elected.

A motion was adopted that the constitution be so amended as to include federal districts, instead of the present boundaries. Another resolution was adopted, that the next district meeting be held in Melville.

### Appointment of Sub-Organizers

On motion of H. C. Fleming, the following were appointed sub-organizers: William Penny, Balcarres; J. E. Paynter, Tantallon; W. J. Benwell, Melville; William Evans, Rocanville; Dr. Free, Webb; John Parker, M.L.A., Kelliher; E. Hunter, Govan; George Gatenby; A. Johnston, Dubuc; James Rowand, Nokomis; C. Clayton, Dubuc; Alfred J. Burrows, Raymore; Fred Ironsides, Kelliher; James A. Harrison, Fort Qu'Appelle; H. Watson, Lipton; Malcolm Nicholson, Semans.

### District No. 9

District No. 9 held its district convention on Thursday morning of convention week, in the auditorium of the Metropolitan Church, with James Inglis, of Rokeby, in the chair. F. A. Gallagher, of Yorkton, was appointed secretary and on the adoption of a motion to that effect Mr. Kirkham presided.

In the discussion arising out of the reading of the minutes it was decided that resolutions adopted at the meetings should be incorporated in the minutes.

Mrs. A. Wallace, of Guernsey, women's director, gave an account of her work during the year and urged that more effort should be made in interesting the younger people in the movement, by encouraging social gatherings and entertainments.

### Director Inglis Reports

James Inglis, district director, reported on the membership drive which had been prevented by the "flu" epidemic; as well as by the difficulty in procuring labor for the land. Three meetings and six picnics were held during June and July; while the Chautauqua meetings at Melville and Watrous were not a success from the standpoint of organization.

After discussing the work of the proposed trading extension with approval, Mr. Inglis suggested that his district was too large for one director; having 100 locals to cover expenses.

Mr. Inglis drew attention to a district which might be organized, east of Wroxton, the population consisting principally of Galicians, and claimed that it might be helpful to have some one address them in their own language.

He recommended the adoption of the Farmers' Platform and an effort to put it into effect. He pointed out the need of the association going into politics; of arranging the organization districts according to federal divisions and recommended that the locals should be used to call conventions of all the people.

### Election of District Directors

After the adoption of a vote of thanks to Mr. Inglis and Mrs. S. Wallace, nominations for district director were as follows: James Inglis, Rokeby; Joseph Caldwell and J. R. Mosiman. After a ballot the scrutineers announced the re-election of Mr. Inglis.

The following were appointed sub-organizers: 1, Churchbridge, A. H. Quanda; 2, Rokeby, Alex. McGregor; 3, Yorkton, F. A. Gallagher; 4, Foam Lake, Ira Odell; 5, Wynyard, S. Sveinbjornson; 6, Dafoe, J. Laxdal; 7, Langham, A. Bowman; 8, Wolverine, W. D. Summers; 9, Rhein, Amos Burkell; 10, Wroxton, Andrew McKesick.

On motion it was decided to leave the appointment of the secretary to the board, consisting of the directors and sub-organizers.

### Meeting of Sub-Organizers

The same evening a meeting of the sub-organizers was held, with Director James Inglis presiding. The first order of business was the election of a secretary, when Amos Burkell, was selected. It was also arranged that Lanigan be the next place for holding the district convention.

On motion of Mr. Quandt, it was agreed that sub-organizers be given the same standing as delegates, whether appointed as delegates, or not.

### Ninety-seven Per Cent. Members

While there may be complaints regarding the lack of progress in certain sections of the province, regarding the organization or continuation of grain growers' locals, there are other districts where the enthusiasm is so great as to leave nothing to be desired.

Under a recent date, a communication was received at the Central office, from George Burden, secretary of the Red Jacket Grain Growers' Association, who, in sending in the fees for the Red Jacket local, announced that: "We have 97 per cent. of the farmers of this district enrolled permanently."

To all of which the Central office replies, to the rest of the locals: "Go thou and do likewise."



# Bridges and Structural Steel



SPAN BUILT BY HAMILTON BRIDGE WORKS COMPANY LIMITED, AT CALGARY, ALBERTA.

One of the most important industries in the Dominion is located at Hamilton, Ont., where are situated the extensive works of The Hamilton Bridge Works Company Limited. This company, established almost 50 years ago, as a machine tool works, is one of the oldest bridge-building concerns in America. It has grown to such an extent that its annual output is at present about 40,000 tons and the total value of this material turned out by the company is something over \$3,000,000 annually.

The Company has two large plants located in Hamilton. The West End plant covers approximately eight acres and employs in the neighborhood of 300 hands, while the East End plant covers almost 15 acres and furnishes employment to approximately 350 hands. The yearly wage bill alone of this tremendous plant exceeds \$500,000.

In addition to other work the Company, during the past 18 months, has

fabricated 16,000 tons of ship work for the American International Ship-building Corporation of Hog Island, Pa., for parts of the 180 vessels this corporation is building. This has brought benefit to Canada and helped to furnish steady employment to their large staff of workmen.

This Company manufactures all kinds of railway bridges, railway turntables, electric railway bridges, electric railway power houses and running sheds, highway bridges, buildings, roofs, structural work of all kinds, steel tanks and towers for water works, steel grandstands, railways and observatories, steel ships and vessels, and steel poles for telegraph, telephone and power transmission lines.

It is with pride that this Company claims to have built more bridges than all bridge companies in Ontario combined, particularly in view of the fact that contracts are often awarded to them though their quotations are sometimes higher than competitive

concerns. This fact, it is felt, is due to the honorable conduct of their business and the high value of their manufacture.

The high standard of efficiency attained in this plant permits the assertion that for any given sum the Company can produce better value than any concern in its field. Owing to the large stock of metal carried at all times by this concern they are prepared to supply constructional steel bridges and structural steel at short notice.

An idea of the part that this Company has played in the development of the Dominion may be gathered from the fact that bridges have been in construction at the same time throughout the western provinces, British Columbia and eastern Canada. Among the notable engineering works successfully constructed by the Hamilton Bridge Works Co. Limited, may be mentioned the following: Bloor Street Viaduct, Toronto, completed 1917, total length 1,563 feet, width

86 feet, height of roadway above river 130 feet, total weight of steel 5,600 tons. St. Clair Tunnel, for Grand Trunk Railway; Steel Side Wheel, Steamer Chippewa; The Stony Creek Arch Bridge on the Selkirk Range, B.C., for the Canadian Pacific Railway, 483 feet in length, arch span 336 feet long; the Rouge River Bridge, double track span, for G.T.R.; the Fire-proof Building for Robert Simpson Co., Toronto; Montreal Drill Shed Roof; the Steel and Iron Work for the Sault Ste. Marie and Soulanges Canal Locks; Steel Work for Fireproof Bank of Hamilton Building, Toronto; Steel Work for Sun Life Building, Hamilton; Steel Work for Bank of Hamilton, Hamilton; Steel Grand Stands for National Industrial Exhibition, Toronto; Ontario Jockey Club, Hamilton; and Fort Erie Jockey Club; Steel Buildings for Steel Company of Canada, Algoma Steel Corporation; Dominion Steel Foundries; British Forgings, and other steel companies; also many other equally important constructions.

The officers of the Hamilton Bridge Works Company Limited are as follows:

President—Sir John Hendrie, K.C., M.G., C.V.O.	Chief Engineer—R. K. Palmer.
Vice-President—William Hendrie.	Manager of Sales—J. P. Mantle.
Managing Director and Secretary—W. B. Ohamp.	

THE MAIN OFFICES OF THE COMPANY ARE AT HAMILTON, ONTARIO

☞ No trouble to send you estimates and plans. ☞ We claim we build more Highway Bridges, and better ones, than any other firm in Canada.

## "Facts Are Better Than Assertions"

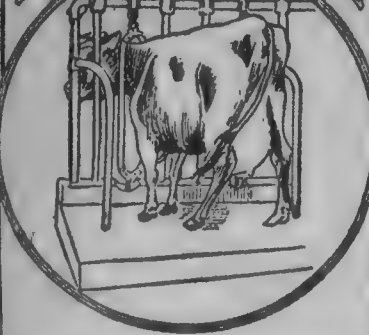
We can refer you to bridges built in every province in Canada. The majority of counties and townships in Ontario have bridges built by us.

# THE HAMILTON BRIDGE WORKS COMPANY, LIMITED

ESTABLISHED 1872 *Canada's Oldest Bridge Manufacturing Company* HAMILTON, CANADA



# LOUDEN



**A contented cow is a profitable cow.**

**—Are Your Cows Contented?  
Are They Profitable?**

If not make them so by doing away with your old time wooden stalls. They gather dirt, waste feed, harbor disease germs—and prevent the free circulation of germ killing and life giving air and sunlight.

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PERFECT Steel stable equipment is easily and quickly installed—in-sures cleanliness and ventilation—means more comfort for your cows—less work—more profits for you.

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Our 112 page Barn Plan Book is free—not a catalog—shows 74 barns with floor plans—estimated costs—instructions on concrete barn work—barn drainage—ventilation—lighting—strength of materials—framing—roof construction.

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# Machinery on Peace Time Basis

**The Day of the Single-Purpose Machine and the Highly Paid Munition Worker is Over—By A. R. Kennedy**

**I**T would be hard to imagine or picture a greater contrast than is found in the machinery market today and that of a year ago. At that time industry was keyed up for tremendous production. The war department was in charge. Production, regardless of all ordinary precaution in regard to costs, was ordered and commanded. The government was the ready purchaser of all that the shell shops could turn out. If the comparison can be allowed, the government stood on one side, urging every shop to greater effort, and they also stood on the other side, taking the product and paying the bills.

Sales departments forgot for the time being what work looked like. Their chief occupation many times was acting as apologist for deliveries that were certain to be far behind the promised schedule. Organizations sprang into existence that were not known or heard of before. Some of them made money out of the shell business, and some of them did not. The latter is an aspect of the case that is not generally recognized. Public fancy has it that every concern that touched the making of munitions tapped a gold mine. There are manufacturers who lost money. They did this in more ways than one. There are also losses from old and established lines that were neglected. It will take time and money to gather these lines together again. But still it was not so great a risk as that taken by the man who went to the front.

## Speed the Great Cry

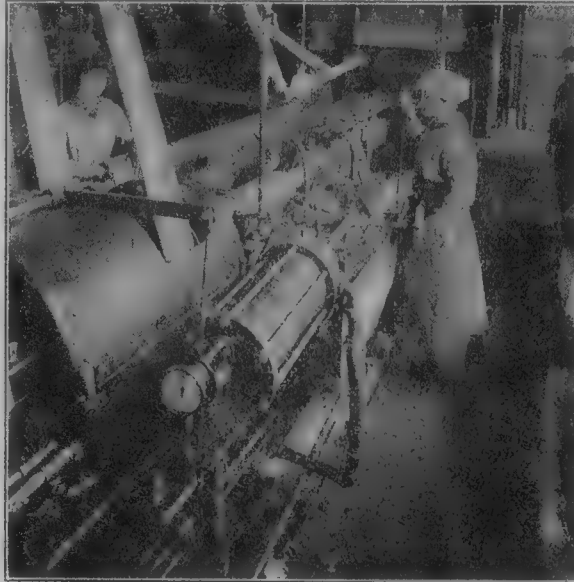
The office of the Imperial Munitions Board was to let the contracts and get results. They did not inspect. They came under a separate department. It was to the speeding of output that the efforts of the best mechanics of the North American continent were turned, and it was in this quest for production that the single-purpose machine tool, the outstanding mechanical feature of the year, was brought to perfection.

The single-purpose machine is exactly what the name would indicate, viz., a machine designed to do one operation. The average machine used in a machine shop can do a variety of work. It is equipped with parts for meeting all sorts of conditions. But the single-purpose machine could do but one thing. It was of rugged construction, simple of operation, not intricate, and lent itself easily to operation by a person whose knowledge of machine shop practice was at the zero point. One machine would do rough turning, that is, it would take the rough shell blank and cut it down to specified dimensions. It would do nothing whatever at the some 20 odd operations through which the shell passed. Other machines attended

to the rest of the work. In this way it was possible to arrange the sequence of these operations so that they would simply pass on uninterruptedly through the shop. And it was right here that Canada got its first big taste of that condition known as quantity production.

## The Work of Women

It may have been thought that women's



Women Workers on the Finishing Turning Operation.

sphere was in the home, and we must confess that a lot of people still hold tightly to this view, but the way women went into machine shops, mastered the operations there, and broke records that men could not begin to approach, was enough to make some of the sterner sex sit back and gasp for breath. For instance, very careful figures were kept in one plant at Toronto. The factory manager there, reviewing the work of their shell plant recently, informed the writer that practically every record in the shop was held by a woman worker. This was especially true in the manufacture of fuse, where the operations were on a smaller scale, and where strength was not to be reckoned with. But the figures hung up by the women were many times 50 and 75 per cent. above those turned out by the men on the same kind of machines and under similar conditions.

But the women worked on all the machines. Great, ponderous machines for boring, for rough turning, for finish turning; in fact, for all operations on the big six-inch and 9.2 shells were done by women. It was a bit strange at first to go into those great shops,

where 3,000 or 4,000 hands were at work, and see the over-all women. A tightly drawn cap hiding the last traces of their identity. There they were, as though born to the machine shop. And let it be remembered that the shell blank for a 9.2 shell weighs some 370 pounds. Of course there were all sorts of carriers to handle this work, but even so, the women knew quite well how to make these carriers, shells and machines behave.

## A New Cutting Method

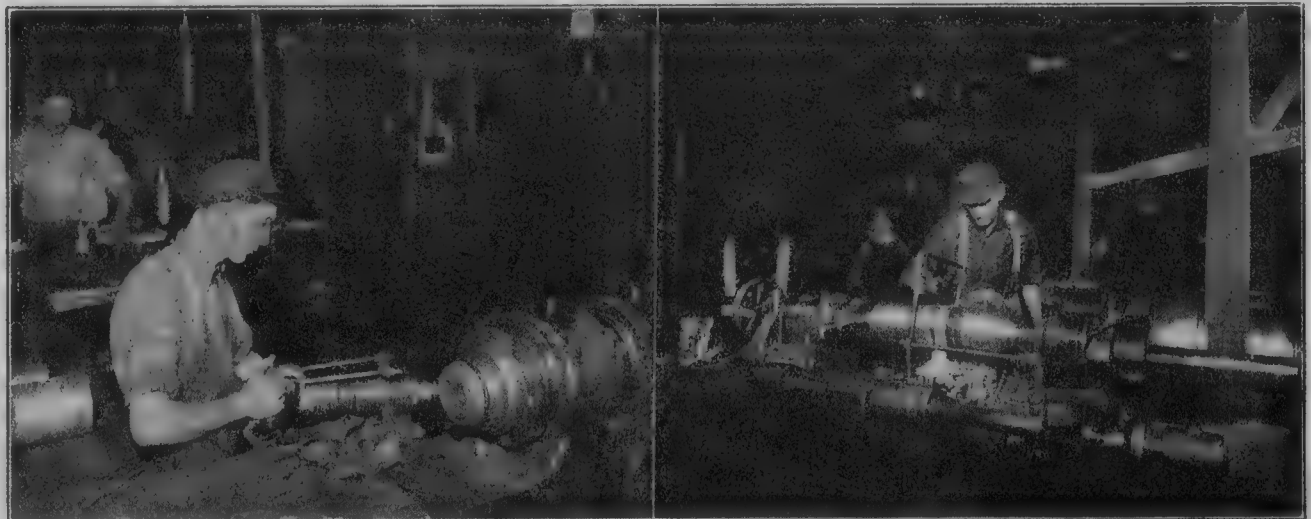
One of the outstanding mechanical achievements of the war shop, although not confined strictly to the last year, was the work of dry-cutting on steel. High-speed steel cutting tools are worked in such cases under a bath of cutting compound, to keep the cutting point from getting too hot. The machine is fitted with piping, and this compound is pumped under pressure, so that it always plays on the point of operation. But the coming of stellite made the bath unnecessary. Stellite, it may be explained, is an alloy, the component parts being cobalt, chromium and tungsten. The cobalt is, of course, entirely a Canadian product, while chromium is found at several points in the United States. The making of stellite was discovered by an American, Haynes, while engaged in the study of alloys. It was indeed strange at first to see a cutting tool, on a rough turning operation, tearing off great rings of steel chips, without the application of any bath to the cutting point. The superintendent of one of the largest shops tried it out, and watched it after some time getting red hot and then white hot, but still it kept on cutting, and seemed to do its best work at that stage.

## The Shell-Shop Training

If you want to start an argument, ask a good mechanic, a tool-maker for instance, how shell-shop training is going to benefit the man who never worked in a machine shop before. He will tell you—and he'll probably refer to this man as a "shell buster"—that he was simply the human part of the machine, that he will know nothing more about machine shop practice than he did when he went to work. Well, allow for all this, and then come down to the facts. The man who worked in a shell shop was kept down to close limits. By that we mean thousands of an inch. Men who have watched the effect of this training figure it out it out that the bricklayer who worked in shell shops is going to be a better bricklayer; the farmer who went in is going to know more about his tractor, he is going to appreciate fine measure.

Continued on Page 73

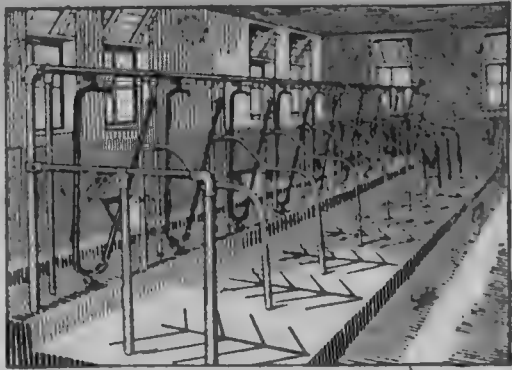
**GILSON TRACTOR**  
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**THE STANDARDIZED TRACTOR**  
—Is a business machine designed along sound mechanical lines of proven worth, with no freak features. Sizes 10-20, 19-25 and 15-30 h.p.  
Write for free catalogue and rock bottom prices.  
Dealers, write for our Money Making proposition.  
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Rivetting in a Base Plate by an Air Hammer.

Finish Turning—Note Strong Lines of the Lathes.





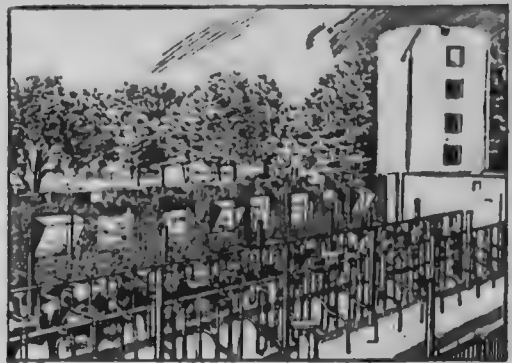
BT Sanitary Steel Stalls permit the sunlight to flood the stable freely. Sunlight kills disease germs. The steel stalls harbour no germs or vermin. They do not soak up liquid manure. Note the fine appearance of the stable.



Here is a poorly lighted, unsanitary barn of the old type where disease germs thrive. Tuberculosis germs thrive in dark, dirty barns. Liquid manure soaks into the old wood stalls and is one of the chief causes of tuberculosis.



These cows are tied in the steel stalls. Note that they are lined up evenly with the gutter so that no manure falls on the cattle stand and none falls on the walks. This keeps the cows clean and saves much work in stable cleaning.



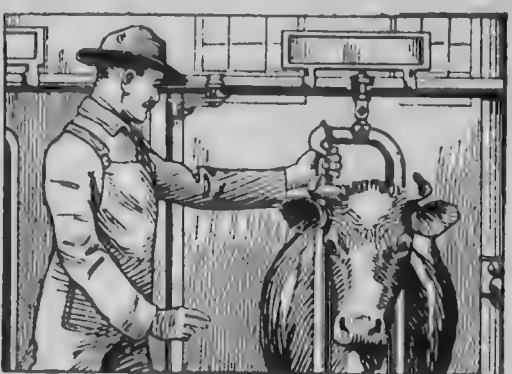
Here is the barn of Col. Robertson, Williamstown, Ont. It caught fire and burned to the ground, yet the steel stalls were uninjured, and after the fire the cows were tied up in their places and a photo taken. A few cents made the stalls as good as new. BT Stalls are fireproof.



Here is what happens to the old style barn when it catches fire. The old wood stalls burn up like matchwood and everything is a loss. Not only that, but it is also difficult to get the cows out because they tug and jerk at their chains, making it impossible to undo the chains.



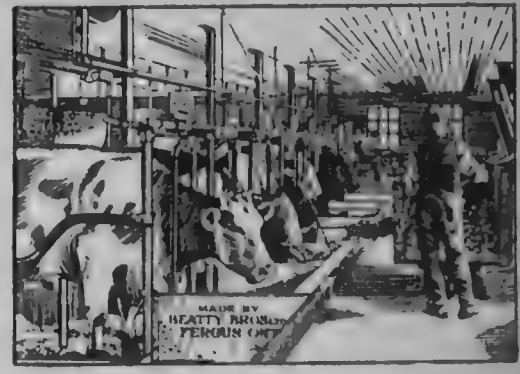
Cows when tied in steel stalls have absolute comfort. They can lie down on either side, turn their heads freely and card themselves back to their flanks. Cow comfort increases milk production. Cows will give 10% more milk when tied in these stalls.



The BT Steel Stanchion is easy to open. This saves work and annoyance every day. You can open this stanchion with one hand. A whole row can be untied in less time than it takes to undo a single chain tie. This is very important in case of fire.



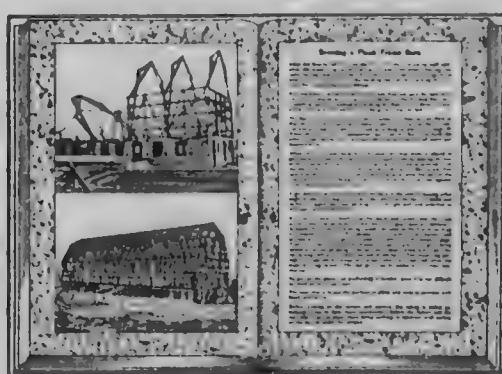
The old-fashioned chain tie is hard to open. This wastes time every day. It is a serious matter in case of fire, for the cow becomes terrified, tugs back and it is impossible to release her. In addition a chain tie is very uncomfortable for the cow.



Every cow has her own manger in this stable and cannot steal from her neighbor. The fast eating cow cannot gormandise at the expense of the slow eater. With the truck the cows can be fed in a very few minutes. The time work saved by up-to-date stable equipment pays back much of the cost.



Here are the BT Sanitary Steel Calf Pens. A whole row of the calf stanchions can be opened or closed at once. Each calf has a separate pail and cannot get another's portion. The steel pens are sanitary and durable.



The BT Barn Book is a well illustrated book of 352 pages and tells how to build a barn and fix it up. Every farmer who is building or remodelling should have a copy. It is free, if you will fill in the coupon and mail.

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**His Wife Sewed!**  
**The Eldest Girl Baked!**  
**The Big Son did the Blacksmithing!**  
**The Husband—ran the Farm!**

**Such was the story of the Canadian Pioneer**

The allotment of tasks may have varied. But by maintaining this variety of Industry at home the heroic old farmer—and many a modern pioneer does the same—kept himself almost independent of outsiders.

By keeping his obligations to Outsiders down to the bare necessities he paid off his debts, built up his savings and made his whole family prosperous.

\* \* \*

The Canadian nation is like a Canadian farm.

There are mortgages on it—money borrowed to build public works, or railways, or canals, or to pave streets and lay side-walks.

It has debts for goods bought in foreign countries.

But like the farm family, Canadians are able to divide the tasks. One son grows wheat and another mills it. A third makes bags to bag the wheat, and a fourth helps run the railway that carries the wheat to market.

The more Canadians help Canadians the more wealth remains in Canada; the less debt to foreigners. The sooner the Canadian "Mortgage" is paid, and the sooner Canadian debts to outside countries become "credits."

\* \* \*

When you go to a store to buy cotton goods—print, or sheeting, counter-panes, towels, duck, drill, bagging, whatever it is—**buy Canadian Cotton!**

We do not grow cotton in Canada. But by buying the raw cotton and manufacturing it in Canada, Canadians gain employment. Canadian cotton factories produce one hundred million pounds of manufactured cotton in a year. The wages paid in Canadian cotton mills totals over ten million dollars a year. The Dominion Textile Company

alone pays over three and a half millions annually to Canadian workers as wages. And produces over thirty million pounds of manufactured cotton!

In other words, Canadians are doing work in Canada which saves other Canadians from going abroad for their cotton goods. And not only so—Canada's twenty thousand cotton workers represent a huge buying power which, in its turn, supports other Canadians. The cotton they manufacture gives work to other thousands who make it into articles of various kinds—and who in their turn support still other Canadian workers.

\* \* \*

If you would help Canada and Canadians to be self-contained—

If you would see Canada wipe off foreign obligations and build up a Credit Balance—

If you would strengthen the one great market which alone is yours exclusively, which always needs your kind of production, whatever it is, and always gives it a preference—the Canadian market.

**BUY CANADIAN COTTONS!**

These cottons are **not** "just as good as" imported cottons—they are **BETTER!**

They are made by wholesome people—Canadians!—in clean factories—Canadian factories!

They are sold as cheaply as or more cheaply than the foreign-made cottons!

When a clerk tries to sell you cotton on the grounds that it is "Imported," remember this—he is showing you nothing better, nothing really cheaper, but only something which will add to your country's obligations to foreign workmen, and take work away from Canadians.

**BUY CANADIAN COTTONS!**

**THE Dominion Textile Company Limited**  
**MONTREAL**



# Canada's Textile Industry

**T**HE most important industry in which a community can engage is agriculture, because upon that is based the production of the two prime necessities to human life, food and clothing. In a country with a cold climate, such as Canada's, the one is scarcely more important than the other. But everywhere, in all ages, as is proven by the earliest records in man's history and by the discoveries of antiquarians, attempts have been made to fit and decorate the human body with fibrous materials of some sort. Indeed, no history goes back far enough to tell the precise beginnings of the art of spinning and weaving.

From the use of the distaff and the spindle, to the marvelously intricate, almost human operation of the textile machinery of the present day, from the crude weavings of prehistoric man to the exquisite and varied designs of the twentieth century, is a long story, illustrating in a thousand-and-one details, the romance of science and persistent industry. The first great improvement in spinning was the invention of the hand-wheel, in which the spindle was mounted horizontally in a frame and rotated by a band passing around a large wheel set in the frame-work. Little further change took place for a long period in this method of making fabrics, under which the output was necessarily restricted by the amount of manual labor that could be brought to it and the small capacity of the crude spinning wheel and equally crude loom.

The great textile industry of the world, as we understand it at the present day, had its beginnings in the basic inventions of Wyatt, Hargreaves, Arkwright, Crompton and others. Improvements in the loom had been effected before their time, and in various countries, but during the eighteenth century there seemed to spring up in many minds a persistent idea to invent textile appliances which should place the industry on an altogether different footing.

## Location of Big Mills

It is not surprising that, in Canada as elsewhere, each branch of the industry has developed best in the section in which experience, natural conditions, and perhaps some early impetus of a fortuitous character have shown to be best adapted to the purpose. For instance, the greatest proportion of Canada's cotton mills are located in Quebec province, with its advantage in the possession of a class of people from

*Her Woolen, Cotton and Knitting Mills are Busy—By the Editor of The Canadian Textile Journal*

whom operatives well adapted to this class of industry can be obtained most readily. The woolen mills are situated largely in Ontario, and to some extent

upon the untiring efforts of present-day Canadian mills to produce goods of up-to-date design and finish, the success of which efforts no unbiased observer will deny.

Another obstacle against which the Canadian cloth manufacturer has had to contend, has been the irritating lack of patriotism of tailors and retailers, which has encouraged customers to look for quality and design only in imported suitings. To such length is this tendency carried, that in many of the better-class tailoring establishments the claim is made that hardly any goods of domestic origin are carried in stock. Moreover, high-class goods of Canadian make are sold as imported, while inferior material of foreign make is sold as Canadian. The truth being, that in many lines, the Canadian product is fully equal to the best produced anywhere; in fact, as many of our readers will remember, homespun from some districts of Canada have more than a national reputation.



A View of a Spinning Room in a Canadian Textile Factory.

in Nova Scotia, which sections produce a very fine quality of wool. Knitting mills are scattered promiscuously throughout the breadth of central and eastern Canada, but largely in Ontario and Quebec.

The two branches of textiles which have attained to really large proportions are the woolen and cotton manufactures, of which the raw material for the former is the only one native to the country. We will, therefore, begin with the brief history and description of the Canadian woolen industry.

The Canadian woolen industry itself, in spite of the high reputation for quality upon which it has been based, and of the gratifying progress it has made, has not, it must be confessed, kept pace with the increase of population, and with the development of other lines of manufacture. As to the precise reason for this state of things, opinions differ, but it may be safely inferred that it is largely due to the overwhelming competition in this class of goods by the manufacturers of Great Britain, who are past masters of the art of woolen manufacture. In certain districts also, they are peculiarly past and present masters of the art of shoddy making and to this cause, and to the large importations of cloth which make their way into Canada from Yorkshire, is due to the fact that the average clothing worn by the poorer classes of our population today is inferior in wearing qualities to that worn in the old days, when Canadians, almost universally, wore the splendid product of Canada's custom mills, made from the fleeces of Canadian sheep. This in no way reflects

But, while Canada's woolen industry has kept back contrary to its deserts, and while for the above reasons, the number of mills and of hands employed are less than they would be under more auspicious circumstances, it is indeed gratifying to note that the industry today is in a more prosperous condition than it has been for years. Practically all the mills report business good, with orders coming in apace. Wages have been good and the employees contented, giving little or no trouble in the matter of strikes, which have been the bane of so many industries. In fact, as a general rule, the relations of employer and employed in the woolen industry in Canada have been exemplary.

## Large Cotton Manufactures

The largest branch of the textile industry is that engaged in the making of cotton yarns and fabrics. Many people believe that because cotton cannot be grown in Canada, no attempt should be made towards working up this product. But cotton, the world over, is the basis of the textile industry. The relative importance of the fibres that are used in the manufacture of textiles may be judged from the following figures, which are approximately the annual world's production: Cotton, 75,000,000 hundredweight; wool 25,000,000 hundredweight; flax, 14,000,000 hundredweight; hemp, 11,000,000 hundredweight; jute, 12,500,000 hundredweight; silk, 375,000 hundredweight.

To cotton belongs the credit for the development of the textile machinery, and the modern factory system of manu-

Continued on page 73

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Saves Time  
Saves Work  
Saves Money  
Does the Work

*Burn off that Stubble!*

Lightning  
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Burner

WRITE TO THE MAKERS

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# Drought Insurance

## Now An Accomplished Fact

I farmed for many years in Saskatchewan, during the days of 60-cent wheat, with varying degrees of success. The variation was mostly a matter of going from bad to worse, principal on mortgages remaining unpaid and interest charges steadily piling up.

It was not only a matter of marketing wheat at 60 cents per bushel. One year a hail storm destroyed my entire crop; another my wheat was badly frozen resulting in a lesser quantity of grain and grades that were practically unsalable, and next, there was so little rain-fall that my wheat only yielded eight bushels per acre. These were trying times.

Hail, frost, drought, a constant menace and a limiting factor to production.

Eventually a system of insurance was devised by which the crop could be insured against loss by hail. Later the Municipal Hail Insurance scheme came into force. Hail Insurance did not reduce the number or the destructiveness of the storms, but did make it possible to guard against heavy financial losses.

The introduction of Marquis wheat made possible the earlier maturing of wheat, and very materially lessened the probability of loss by frost.

Conditions were improving, but I was still in this position. My annual yield and yearly profit or deficit was governed by the amount of rain that fell during the season. If we had plenty of rain during the growing season I could raise 25 or 30 bushels per acre. If we did not get the rain my crop would yield probably ten bushels or less per acre.

In 1919, for instance, my wheat only yielded seven-and-a-half bushels per acre, and I had a big loss on that year's business.

I was talking to H. C. Bowman, yesterday. He has been farming in Saskatchewan for several years, and he said to me, "1918 was one of the driest years I have ever seen, but I did not fare too badly. My wheat averaged 12 bushels per acre." I have had scores of letters from farmers this year. One will say, "Completely dried out. My wheat made only five bushels per acre." Another, "No rain. We harvested only seven bushels per acre of wheat." A third, "This has been a very dry year. I have neither seed nor feed for next year." These letters vary but little. The drought in some districts was worse than in others, but the sum total of the loss was enormous.

Last fall I paid a visit to the home farm of Mr. Seager Wheeler, of Rosthern, Sask. They had had less than three inches of rainfall at Rosthern during the growing season of 1918, and I was surprised to find such abundant crops on Mr. Wheeler's farm. He told me his entire wheat crop averaged more than 40 bushels per acre, and I know his statement was true for I saw the crop with my own eyes.

Mr. Wheeler did not consider this yield—to me astonishing—out of the ordinary. He said it was not an unusual occurrence, and was due to his method of operating. Mr. Wheeler does not fear drought, does not consider it a menace, he has learned how to guard against it.

He has written a very unusual book entitled "Profitable Grain Growing." I have had the privilege of reading this book and believe it to be the most unusual work of its kind ever written. In it Mr. Wheeler tells how he raised an average of 40 bushels of wheat per acre on less than three inches of rainfall. Had I been in possession in 1910 of the information contained in Mr. Wheeler's book, I believe that it would have helped me to the extent of \$2,000 for the one year, and I never read a book that was so chuck full of practical information and at the same time so intensely interesting. It claims your interest like a detective story. It is really the life story of Mr. Wheeler, and tells of his wonderful experiments and how he has developed his World-Prize, Heavy-Yielding strains of seed. I would not be without this book for many times the amount of the purchase price. I believe it will be worth \$1,000 in cash to any person who raises 100 acres or more of wheat, who will study it.

The methods employed by Mr. Wheeler can be employed by anyone. They provide a drought insurance that will positively prevent undue loss from drought in the driest year.

*The above is what one Saskatchewan farmer thinks of Seager Wheeler's book. We believe you will find it just as valuable.*

You should secure a copy of "Profitable Grain Growing" without loss of time.

Up until the present time it was not possible to buy this book but we believe there are those who would rather buy it than secure the subscriptions, so we are now offering it for sale.

The price is \$3.00. We want every Guide subscriber to secure a copy. So positive are we that once you see this book, you would not part with it for many times the amount of the purchase price, we will send it absolutely free of charge to any paid in advance subscriber.

You keep the book in your own home for seven days. If you want to keep it send us \$3.00. If you do not, simply return it to us in an unsoiled condition. Clip the coupon below and mail the very first time you are in town.

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BOOK DEPARTMENT, WINNIPEG.

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Name.....

Address.....

Write Plainly

No. 11.

# Crude Petroleum--Its Products

*Valuable Liquid was for a Long Time Neglected—Demand Now Threatens to Outrun the Supply—By S. R. Parsons*

**P**ETROLEUM is a naturally occurring liquid of great economic importance—the most valuable of the bitumens. It is, like natural gas and asphaltum, an extremely complex mixture of compounds of carbon and hydrogen. Moreover, it contains many widely varying substances in small amounts—sulphur compounds, products of oxidation, nitrogenous substances, etc., whose exact nature is not always clearly defined.

There are many theories held by scientists as to the origin of crude petroleum. On the whole the supposition that petroleum is derived from a natural decomposition of the fatty remains of marine organisms, both animal and vegetable, seems to be received with most favor.

It is thought by experts that among the ancients and in Biblical days crude petroleum, referred to as "pitch," "slime," "oil out of the rock," etc., was known and used in a more or less limited manner. Even as far back as 1595, Sir Walter Raleigh published an account of the pitch lake at Trinidad. The Indians of the North American continent also made use of crude oil, which they found here and there upon the surface of the earth or floating upon the streams. It was only about 60 years ago, however, in the United States as well as in Canada, that crude petroleum was earnestly sought after as men have sought for gold and silver. The early history of the hunt for crude petroleum and then making proper use of same in a commercial manner is a long story of struggle, trial and victory. One of the early preachers in Pennsylvania is stated to have voiced his objections to the search in the following words: "Do you know that you're interfering with the Almighty Creator of the universe? God put that oil in the bowels of the earth to burn the world at the last day, and you, poor worm of the dust, are trying to upset his plans." For more than a generation past the production and refining of crude petroleum has ranked amongst the world's foremost industries and is used commercially in greatly increasing quantities. Nothing can be more fascinating than the story of petroleum from the well to the lamp in our homes, the gasoline engine in our factories, on our streets, and upon our waters, as well as the armoured tank upon the field of battle. Crude petroleum and its products has played a wonderful part in the general development of the world during the past 50 years.

## The Refining of Crude Petroleum

In the early days the methods of refining used were very crude and imperfect as compared with those now existent. At first, as many of us can remember, the chief product of crude petroleum was kerosene, more popularly called coal oil. This was certainly a great boon to the people generally, especially prior to the somewhat limited use of gas and the general introduction of electric lighting. Even today in the poorer districts of our cities, and throughout the country generally, kerosene is used to an enormous extent for lighting, as well as in stoves for cooking and heating. In those early days gasoline was a by-product and hard to get rid of. Refiners sold it for use in gasoline stoves at a price of five or six cents per gallon. Now, however, especially on account of the enormous demand upon the farms, in factories, for automobile, motor boat and air-craft uses, gasoline has become perhaps the main product. It is the first to "come over" in the process of refining, being the lightest in gas. The different products come from the fire stills in the form of gases and are then condensed into liquids. The chief products of crude petroleum as refined are gasoline, benzine, kerosene, fuel oil, lubricating oils, paraffine wax, (the latter having to be eliminated from the lubricating oils before they are fit to be used), road oils, asphaltum, petroleum coke, etc. It will thus be seen that oil refining is a very essential industry, particularly in war times. Munitions plants use large quantities of fuel oil, as well as lubricating and other oils.

## Production of Crude Oil and Products

In the United States, in the year 1917, the production of crude oil was about 340 millions of barrels of 42 wine gallons each, which is about two-thirds of the entire world's production. It is said that the total production of crude petroleum to date in the United States has been over 4,000,000,000 barrels. It is further estimated that the reserve in the ground is over 7,000,000,000 barrels, but this must be guess work to a considerable extent. In Canada, the total production was quite considerable, although stimulated by a government bounty of one and one-half cents per imperial gallon. In Ontario and New Brunswick, in 1917, there was a total production of only slightly over 200,000 barrels of 35 imperial gallons. Outside of this a small amount was produced in Alberta. For a number of years past the yearly decline in quantity of crude oil produced in Canada has averaged perhaps 20 to 25 per cent. The refiners of Canada imported last year about 5,000,000 barrels of crude. Extra supplies of finished products, such as gasoline and fuel oil, were also imported into Canada. The total value of imports of petroleum and petroleum products in 1917 was over \$21,000,000. It will be seen, therefore, that at present Canada is largely dependent upon the United States for her supplies of crude petroleum. It is hard to imagine anything that would add to our national wealth or well-being so much as the finding of large bodies of crude petroleum.

## War Requirements

On account of the fact that the far Eastern producing fields have been cut off very largely, either directly on account of the war or indirectly through lack of shipping facilities, the allies are dependent almost wholly for their supplies of petroleum products on this continent. While the volume of production of crude petroleum has been maintained, yet the stocks on hand have been drawn upon to a considerable extent during the past two years. The amount of gasoline consumed by the fighting forces run into figures that are almost unbelievable. The United States government, in their air service alone, call for from between 300,000 to 500,000 gallons of gasoline per day.

## What About the Future?

The question is often anxiously asked as to the outlook for supplies of crude petroleum and petroleum products, especially after the war. For half a century it has been the habit to fear constantly that the supply of crude petroleum was on the point of being exhausted, but ever and anon new fields of oil have appeared to meet the increasing demand. Like other minerals, however, when petroleum is once removed from the earth it makes the supply that much less. Authorities agree, though, that while there is a continual process of exhaustion, yet it would appear that sources hitherto untapped may make available the supplies that are required for many years to come. Outside of the United States, Mexico, Trinidad and South American countries will, no doubt, supply large quantities of crude oil. Then scientists tell us that almost unlimited quantities of shale carrying petroleum are to be found on this continent that will supplement the liquid production. In Colorado alone, the shale possesses oil reserves that are estimated at from 20,000,000,000 to 36,000,000,000 barrels, and it is likely that oil-bearing rocks will be found scattered over the whole continent. No doubt crude petroleum and the different products of same will fall in price. Just how far down they will go is a matter that will depend upon the world's supply and demand. If the enormous increase in the manufacture and use of automobiles continues and no other suitable fuel is found for same, the exhaustion of crude oil will be accelerated. Practically speaking, however, in thinking of post-bellum days, probably no fears should be entertained as to the reasonable supply of petroleum and products for many years to come.—Monetary Times.



# The World's Depleted Food Stocks

*Reserves of Many Products entering into Daily Consumption are Exhausted.*

By J. L. RUTLEDGE

**D**URING the course of the past four years, the orderly working of the law of supply and demand, as it affects food products, has suffered a thousand varying changes. The demand has been the demand of millions of men drawn from productive pursuits, concentrated in small areas, and living on a scale hitherto unknown. The supply has been the supply of a world turned topsy-turvy, of 40,000,000 producers engaged in warfare, of other millions producing, not the necessities of peace, but the essentials of war. The whole long-established system for the provisioning of the world, commercial exchange, facilities of transportation, the interchange of trade, everything that has gone to foster the complex needs of modern life, has been overturned, set aside or abrogated altogether.

Conditions during the past years have not been healthy conditions. Trade has been fostered and pampered by bonuses or fixed prices or restricted by conservation and restrictions. The healthy leavening force of competition has been largely absent. Inadequate supplies, and civic and governmental interference, have combined to set aside the regulating forces that make for sound business. The world has been a patient, suffering from the malady of war. Many remedies have been tried, some wise, some foolish, but all at least starting from the desire to keep the patient alive; to bridge over the trying period of disease till nature and natural forces could gain sway again.

It would seem now as though that end had been achieved, as though the world had passed from a period of disease to a period of convalescence. The worst days are over, but conditions are not yet those of health, and it will be many a long day before conditions are as they were in early August, 1914. It is probable, indeed, that they never will be exactly as they were four years ago, and it is questionable if prices will ever return to the pre-war basis.

It is questionable, too, whether there is any reasonable ground for hoping that they will. Low prices must filter back through all the varying agencies that go to the marketing of a commodity till a mere pittance is left for the producer, and a pittance is not an incentive to production, and production is the world-need of the moment.

## The World's Bare Cupboard

In the convalescent period that faces the world, this fact is plain, that health,

real health, can only come through a gradual return to normal conditions. The war is over it is true, yet the world's cupboard was never bareer than it is at the present moment. The reserves are exhausted. To re-establish healthy conditions the margin of safety must be restored. There will be food to meet the world's most urgent needs, but it is the re-establishment of the reserves that will be the long and toilsome process, and when these reserves have been re-established, and not till then, will this business return to a normal basis. Not till then can prices settle down into a more or less unvarying groove.

It was a fairly prevalent belief some time ago, that the conclusion of the war would see calamitous declines in food prices. Prices, it was realized, were

the case of West African Cocoa. This was one of the products that during the course of the war maintained very low prices, and West African Cocoa was the lowest price of any stocks offering. The reason for this was the inability to get shipping space to transport the product to market. As a result stocks piled up; there was at the close of the past year some 500,000 bags of last year's crop, and a new crop estimated at about 800,000 bags shortly to come on the market. With such stocks available there would seem to be every reason to expect a decline even from the six-cent figure then prevailing. These figures, however, represent a market under abnormal conditions and any tendency to return to normal must result in a change. As a proof of this fact it was reported shortly before the close of the year that three ships, loaded with 100,000 bags of cocoa were preparing to clear from West African ports for Liverpool. As a result of this opening market the price advanced on the strength of this announcement from six-and-a-half cents to 11 cents.

## World's Markets Opening Up

It is this factor of opening markets that is becoming a large factor in deciding the position of many food products. In certain cases this condition results from an actual change in demand. It may appear strange to speak of any connection between the spread of the prohibition movement and the market for various products. But this movement is a factor that has to be considered. Figures are already proving that the spread of the prohibition movement, has, unquestionably, resulted in a largely increased demand for many products. Notably is this the case in regard to all chocolate products. So great has been the improvement in this industry, an improvement directly traceable to this cause, that producers are preparing to materially enlarge their output facilities, and new firms are springing up in various centres. Tea and coffee also are showing the effect of these changed conditions in a materially increased market. Tea and coffee are also affected by the return of markets long closed owing to war conditions. For instance, Germany and Austria, the second largest consumers of coffee in the world, have been off the market for four years. In that time such reserves as they had have become exhausted. The United States, the largest coffee consuming country in the world, has been on rations, that have seriously depleted her reserve stocks. As a result the signing of the armistice that practically assures peace, obviating as it does the need for restrictions in the United States, and assuring an early

Continued on Page 68



A Canning Factory at Petrolia, Ontario, in the Heart of a Good Fruit District. The warehouse of this plant is 100 feet square, built of reinforced concrete, with cellar capacity of 100,000 cases of canned goods.

too high, and were maintained at these figures because of the existing state of war. It appeared a simple argument from that to conclude that, the war ended, conditions would naturally change. As a matter of fact, with comparatively few exceptions, food products have either increased or maintained their price position since the signing of the armistice. The reason of course is simple: you can't cure the malady of a four-year war, a war more extensive than the mind of man had ever dreamed of, in a day, and it can't be cured thus readily for the simple reason that there are more people anxious to buy than there are goods to be bought. Conditions will gradually change unquestionably, but in the interval, an interval that may last in some lines for many months, in others for a year or even years, food prices will remain high.

## Re-establishment of Reserve Stocks

The re-establishment of reserve stocks is the first important factor tending toward a downward revision of prices, and this is dependent on many things. The re-establishment of exchange on a more equitable basis is one item, stabilizing of labor conditions to permit of adequate production, and the great factor of transportation. Transportation has been during the war, and will continue to be, a very large element in price conditions. Generally speaking, any improvement in the transportation situation will result in easier business conditions and declining prices. There are some interesting variations from this rule however. For instance, take

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The farmers of Canada are in for seven fat years, and they deserve it. And many of them—the wise ones—are taking advantage of this prosperous condition. They are laying aside a part of their present earnings to provide for the lean years that are sure to follow soon or late.

A favorite form of investment among farmers is Imperial Endowment insurance. Such an investment encourages systematic thrift. And it enables a farmer to provide for his family in case he should die early as well as for his own old age.

Ask us to send you our free booklet "Penniless Old Men" which tells all about it. A post card will do.

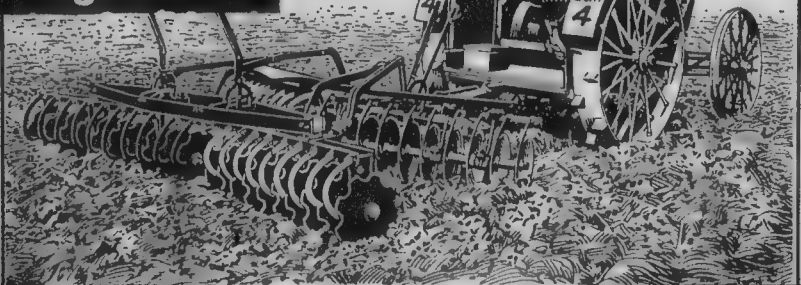
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Weights about 5,000 pounds. 12 h. p. at draw-bar; 23 h. p. at belt. Four-cylinder Waukesha motor. Hyatt Roller Bearings. Perflex Radiator. Short turn. Self-steering in the furrow. Center draft. Burns gasoline, kerosene or distillate. Road speed 2½ and 4 miles per hour.

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## Iron and Steel

The Industry Centres in Nova Scotia and Ontario—By  
Dr. Alfred Stansfield

**O**NE of the most fundamental of Canada's manufacturing industries is the production and manufacture of iron and steel. The iron and steel industries may indeed be taken as a criterion of the economic development of any country. Great Britain, the United States, and Germany, which lead in iron and steel, are also leaders in general industrial development.

Blast furnaces for smelting iron ore, and furnaces and rolling mills for the production and manufacture of steel are exceedingly costly. They can only be established when abundant supplies of ore and fuel are obtainable at a low cost, and when a large and suitable market can be depended on. In the past, conditions were very unfavorable, and many unsuccessful attempts were made before an iron industry was finally established. A small and widely-spread population provided only a limited market, and this was further restricted by the competition of well-established plants in England and the United States. Moreover, the supplies of ore and fuel were not entirely satisfactory. At one time, in Quebec, bog iron ores were smelted with charcoal, but when these ores were exhausted and when charcoal smelting was replaced by coke smelting, the industry languished. At present we have a well-established iron industry in Nova Scotia, using local coal, but importing the ore from Newfoundland. In Ontario, at Sault Ste. Marie, the ores are partly Canadian and partly imported, while the fuel is imported from the United States.

"In the year 1900 the production of pig iron in Canada was only 96,575 tons, while in 1916 it had grown to 1,169,257 tons. In 1900 the annual production of steel ingots and castings in Canada was only 26,406 tons, but by the end of 1916 it had grown to 1,428,249 tons."\*

The contribution of Canada's iron and steel industry to the defence of civilization can be indicated by the fact that it supplied more than a billion dollars worth of shells, while the latest development of war industry, that of shipbuilding, has made very satisfactory progress. We must not forget that the existence of the iron and steel industry, and the impetus it has re-



Ponderous Steel-making Machines. Upper: An electric furnace. Lower: Pouring a 30-ton ingot of steel melted in a blast furnace.

ceived during the last four years, leaves the country well prepared for the future. Now, at the conclusion of the war, there can be no question of the desirability of continuing the development of this industry, and it only remains to point out what has already been accomplished, and in what direction further advances can be made.

### Location of Blast Furnaces

The most important Canadian blast-furnace plants are located in Nova Scotia, at Sydney and Sydney Mines, and in Ontario at Sault Ste. Marie and Hamilton. There are also a number of smaller plants in Ontario and Nova Scotia. Canadian furnaces number 20 in all, with a rated capacity of 4,850 tons of pig iron daily.

While the production of pig iron in blast furnaces is limited to two provinces, steel-making furnaces are distributed from East to West throughout the Dominion, furnaces being in operation in Nova Scotia, Quebec, Ontario, Manitoba and British Columbia. The combined equipment includes 73 open-hearth furnaces, 38 electric furnaces, 15 Bessemer converters, and seven crucible furnaces. Rolling mills for iron and steel are listed in 29 Canadian works in the above-mentioned provinces, and in New Brunswick and Alberta.

Although the present development is one that Canadians may well be proud of, there is considerable room for improvement, and much must be accomplished before the iron and steel industry can attain to the level that we may reasonably expect in this Dominion. The iron industry depends in the first place on the supply of iron ore, and as has been pointed out, Canadian blast furnaces are largely supplied with imported ore. Even if we count Newfoundland as a part of Canada there remains a considerable importation of iron ore from the United States. Iron ores are found throughout large parts of Quebec and Ontario, but these are mostly magnetites and are often titaniferous, and they are not very suitable for use in the blast furnace. Work has already been done by the Mines Branch at Ottawa, and others, with a view to

Continued on Page 72

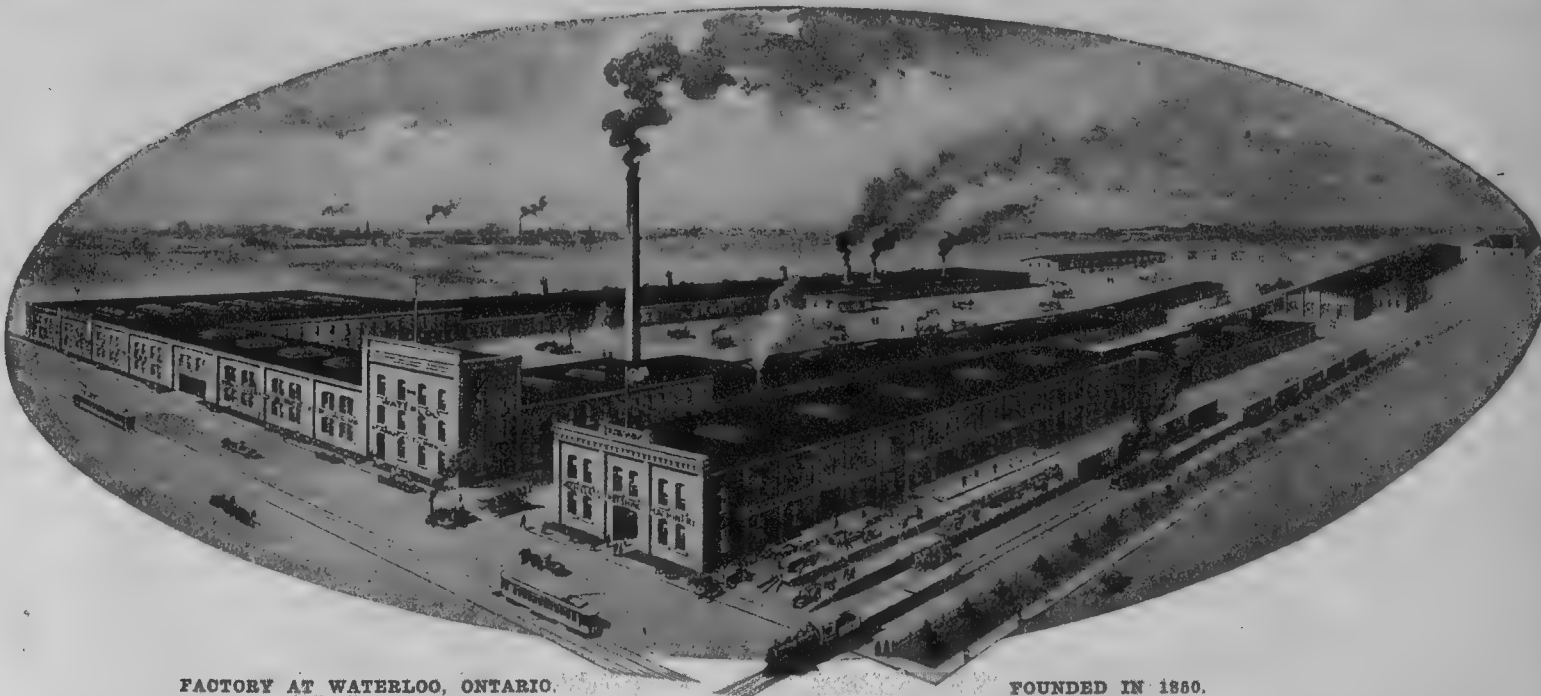
\* Quotation from Iron and Steel of Canada, Feb. 1918, p. 4



Rolling a Three-ton Heated Ingot in a Nova Scotia Steel Plant.



# The Home of Waterloo Threshing Machinery



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FOUNDED IN 1860.

As the name Waterloo in history has for a century past stood out pre-eminently among epoch-making events, so the name Waterloo as connected with threshing machinery suggests pre-eminence and efficiency in the manufacture of engines and grain separators.

This concern has always been alive to the interests of the Canadian farmer and the needs of the day, and has done much to tide over the world crisis of food shortage through its help in filling the granaries of Canada for a hungry world.

Founded nearly 70 years ago, the trade has gradually grown from local to national proportions, and Waterloo machinery is known throughout the entire grain-producing areas of the Dominion. Introduced in the precincts of Manitoba 30 years ago, it has steadily won the distinction which it now enjoys among the prairie farmers over the entire Canadian West.

Realizing the needs of the present day in which it is necessary for the farmer to save his grain in good condition and as early as possible, and thereby save himself unnecessary labor, the firm is specializing in the smaller-sized outfits suitable for the farmer's individual use, which are proving a great success, so much so that in the past the supply could not meet the demand.

Supplementing the Waterloo Steam Engines, the famous Heider Gas Tractor has been added, the Company having acquired the Sales-Agency for Canada for this renowned Gas Tractor, and Plows, manufactured by the Rock Island Plow Company, of Rock Island, Ill. These goods have enjoyed an enviable reputation in the United States for ten years and more, and are meeting with great favor wherever they have been introduced in Canada.

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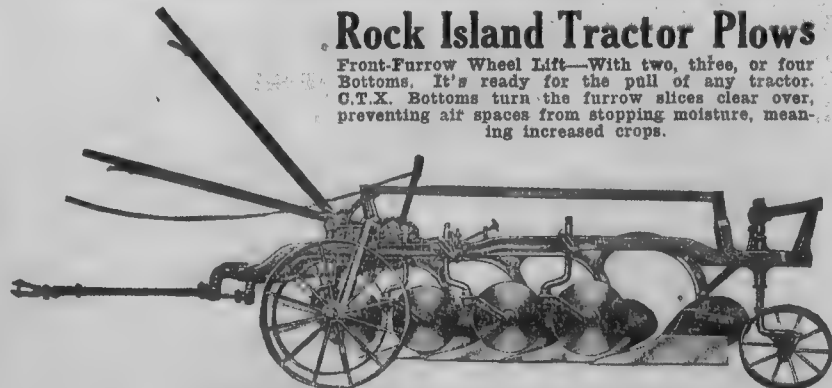
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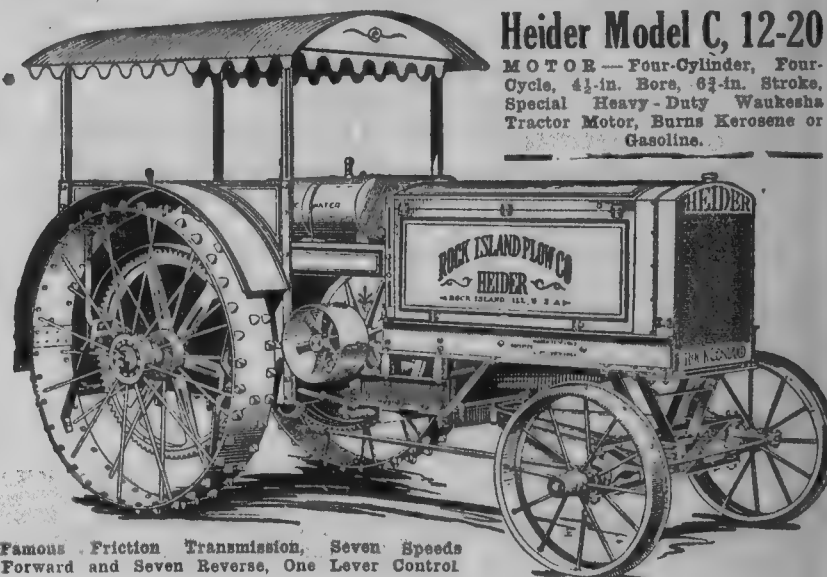
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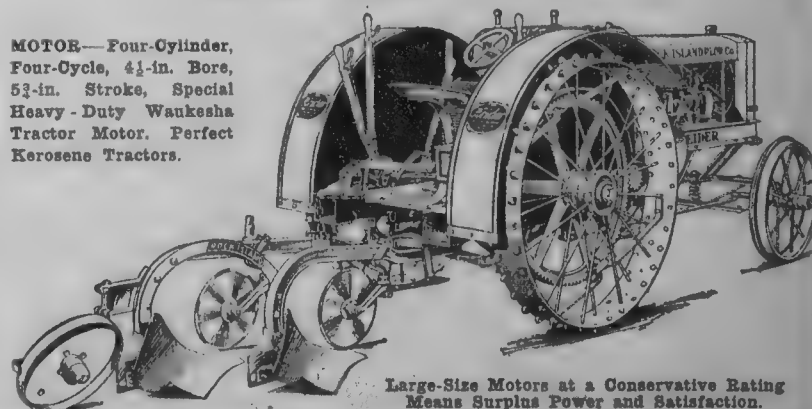
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Single bushel.....	\$2.25 per bushel
10-bushel lots.....	2.00 per bushel
50-bushel lots, or more.....	1.50 per bushel

FODDER CORN—Minnesota Grown:—	per bushel	5-bus. lots
Red Cob ensilage.....	\$4.00	\$3.50
North-west Dent.....	5.00	4.50
Green Marrowfat Peas, very prolific, per bushel.....		\$7.00
Millets, Common, Siberian and Japanese, per 100 pounds.....		\$6.00 to \$9.50
Spring Rye, per bushel.....		\$ 2.25
Rape Seed, per 100 lbs.....		18.00
Sweet Turnip Seed, per pound.....		1.25
Timothy Seed, per 100 pounds.....		15.00

and all the hardiest and best grasses, thoroughly cleaned at lowest market prices  
Try Our Permanent Pasture and Hay Mixture, of the Best Early and Late Grasses.

WE HAVE GROWING IN OUR NURSERY, AND OFFER  
FOR SALE THIS SPRING:—

255,000 Native Maples, one to ten feet.....	
150,000 Russian and other Poplars, in all sizes.....	
115,000 Russian Golden, Laurel and Other Willows.....	
Any of the above, in sizes one to three feet, per 100.....	\$5.00

### SHRUBS FOR ORNAMENTAL HEDGEEs

Caragana, 6-10 inches, seedlings, per 100.....	\$ 1.00
Caragana, 1 1/2 feet shrubs, per 100.....	5.00
Lilac, 2-4 feet, per 100.....	5.00
Lilac, 3-4 feet, per 100.....	10.00

We grow and offer all of the Hardiest of Hardy Fruits, Apples, Crab Apples, Plums, Cherries, Gooseberries, Currants, Raspberries, Strawberries, Rhubarb, Etc., the very fruits that are needed for the comfort and health of the Western Prairie Home.

WRITE FOR OUR CATALOG

THE PATMORE NURSERY CO.

BRANDON, MAN.

SASKATOON, SASK.

## MORE WORK FROM YOUR HORSES

The use of collar pads is humane. Again, your horses will do more work if properly protected by the right kind of pad. TAPATCO is the right kind.

### A NEW AND BETTER HOOK ATTACHMENT

Consisting of wire staple, reinforced with felt washer (note where arrows point). This gives the hooks a better hold and prevents pulling off. The weakest point is made strong and life of pad greatly lengthened.

Look For The Felt Washer.

SOLD BY DEALERS EVERYWHERE

The American Pad & Textile Company

Chatham, Ontario, Canada



Pat. in U. S. Dec. 1, 1914.  
Pat. in Can. Apr. 8, 1915.

## THE HOME BANK OF CANADA

Original Charter 1854.

WINNIPEG, MAN.

WINNIPEG OFFICE - - - 426 Main Street near Portage

F. H. Reid, Manager and Supervisor of Western Branches  
D. F. Coyle - - - Superintendent of Western Provinces

### AN AXIOM OF SUCCESS

It is not what you EARN, it is what you SAVE, that makes for success and puts you ahead of the other fellow.

Bank your savings promptly and let them work for you by drawing interest from

THE HOME BANK OF CANADA  
SAVINGS DEPARTMENT AT ALL BRANCHES

## Automobile Manufacturing

Now Occupies Twelfth Place Among Canadian  
Industries—By W. F. Prendergast

IN common with other Canadian industries, Canada's automotive industry was subjected to a severe test of its worth during the first year of war; but by pulling through in the splendid way it did it was enabled to enter into the era of war-time prosperity, which prosperity it reflected to a very large extent during the year 1918. But there is no evidence that the automobile manufacturer would have made lesser strides in his business had war not mantled our peaceful skies. The automobile industry occupies an enviable position among our industries—come peace or come war, the passenger car or commercial motor vehicle is daily a more and more important, more necessary and indispensable factor in our private and public affairs.

Ten years ago, the passenger automobile was regarded solely as a luxury and travelled about under the alias "pleasure car"; today, it is an essential necessity and is known as the "passenger car." Ten years ago, the motor truck was regarded as a very doubtful experiment. Today, it is as necessary to the business of the country as is power and is beginning to rival the railways of the Dominion as a transporter of freight over short distances. Its further use in this connection is restricted only by road conditions, and as the provincial governments, assisted and encouraged by a substantial measure of federal aid lately promised, improve their roadways, the motor truck will further and further encroach in the freight carriage business. The year 1915 saw the inception of motor freight services and rural motor express lines in Canada, and today there are such lines in operation in practically all provinces. They will grow rapidly in popularity, so the future of the automotive business in the Dominion is secure.

### Industry Centres in Ontario

The automotive industry of Canada is centred in Ontario. There are 11 automobile manufacturing establishments now operating in the Dominion and all are situated in that province. This is due largely to the superior position of Ontario for distribution and to the large number of industrial centres in the province, in virtue of which labor is more available in that province than in other parts of the Dominion. Again, Ontario is particularly accessible from the United States, and this is of supreme importance in that almost all materials used in the construction of automobiles are imported from the United States.

As a strict matter of fact, if one is inclined to be precise, there must remain room for doubt as to whether it can justly be said that Canada has more than one automobile manufactur-

ing establishment proper within her boundaries. The term "assembling plants" might be far more fitting. Without exception, Canada's automotive manufacturing establishments are branches of American concerns. Up to a couple of years ago we did possess one all-Canadian manufacturer, the McLaughlin Carriage Company, of Oshawa, Ont. That is to say, the company was a purely Canadian company and its activities were directed to the building of bodies in which were mounted United States-made motors. Recently, however, the stock of the McLaughlin firm passed to General Motors Corporation of Canada, Ltd., a branch of General Motors of the United States, a \$300,000,000 capital concern, back of which is the magic Franco-American name, Dupont, of Dupont Powder. R. S. McLaughlin, Jr., younger son of the old carriage maker who established the McLaughlin business many years ago, became a vice-president of General Motors and is in complete charge of Canadian business.

### Assembling Plants Predominate

As has been said, the term "assembling plant" might be more fittingly applied to Canadian automotive plants than the term "manufacturing plant." We may take the McLaughlin Company as an example for the purpose of illustrating this contention. The McLaughlin company puts out a finished car, the heavier models of which are equipped with the Buick motor, made by General Motors in the United States and shipped assembled to Canada, and the lighter models are equipped with the Oakland motor, also the product of General Motors in the United States and also shipped assembled to Canada. The McLaughlin Company build the body of the car, that is the woodwork of the tonneau is done by them, but even here a considerable amount of material is purchased manufactured, such, for instance, as the pressed steel sides of the body, etc. This, however, is merely the development of a policy inaugurated in the United States by American automotive concerns. There are on the market today a number of cars not one part of which is manufactured by the company which sponsors the cars and which are only assembled by the firms from which they derive their names. This may appear a somewhat unusual state of affairs, yet it has never made for a poorer class of car in that there are many manufacturing concerns specializing in the production of one particular part of a motor car, and specialization, of course, often makes for better products. So far as the writer is aware, the only company in Canada which manufactures all parts, or nearly all parts of its finished cars in the Dominion, is the Ford Motor

Continued on Page 70

### STATISTICS OF CANADIAN AUTOMOBILE INDUSTRY FOR 1917

	Automobile	Accessories	Repair Shops	Total
Number of Establishments.....	11	24	197	332
Capital Invested.....	\$28,192,858	\$3,155,893	\$4,431,026	\$35,780,677
Value of Materials Used.....	35,585,820	3,788,308	1,961,773	41,335,901
Total Vehicles Produced.....	89,676			
Value of Products.....	\$54,466,273	\$6,405,868	\$5,001,066	\$66,053,207
Salaried Employees (male).....	4,852	1,405	1,508	7,765
Salaried Employees (female).....	164	122	34	320
Wages paid in 1917.....	\$ 4,862,779	\$1,198,596	\$1,200,058	\$7,262,333

### OUTPUT OF VEHICLES CLASSIFIED BY TYPES

	1917	1918
Touring Cars.....	80,544	Club Roadsters..... 561
Runabouts.....	5,502	Trucks..... 111
Closed Cars.....	1,231	Unclassified..... 1,721

### EXPORTS OF MOTOR VEHICLES AND PARTS (During 12 months ended October)

	No.	Value	No.	Value
Automobiles.....	9,319	\$ 4,504,772	8,044	\$3,692,524
Parts.....		1,523,678		1,202,055
Total.....		\$6,028,450		\$4,894,579

### IMPORTS OF MOTOR VEHICLES AND PARTS (During Six months ended September)

	No.	Value	No.	Value
Automobiles.....	11,171	\$ 7,870,377	5,689	\$5,018,941
Parts.....		3,698,140		3,511,077
Total.....		\$11,568,517		\$8,530,018

### REPAIRING AND MANUFACTURING OF AUTOMOBILE ACCESSORIES BY PROVINCES

Province	Repairs	Accessories
Alberta.....	390,852	
British Columbia.....	604,191	
Manitoba.....	226,679	76,724
New Brunswick.....	107,982	
Nova Scotia.....	79,883	
Ontario.....	2,733,722	6,408,894
Prince Edward Island.....		
Quebec.....	608,152	34,250
Saskatchewan.....	339,705	
Canada.....	5,091,066	6,519,868



# Ford

## —an institution

**I**T is the good fortune of this institution to serve a large part of the total population of Canada.

The story of the Ford success is not new to Canada.

The place the Ford Car occupies in the business and social life of the country is firmly established.

How many realize that whatever success has been achieved by this institution is the result of its *ideals of service*?

The Ford Car was produced with those ideals in view. It was designed to give satisfactory, dependable service to the greatest number of people.

The Ford Motor Truck followed. Already it plays an important part in the transportation of Canada's products.

Then, the Fordson Tractor—no small factor in increasing the agricultural production of Canada.

The Ford organization has grown until it now reaches and serves every remote corner of the whole Dominion.

The Ford Motor Company of Canada, Limited, under normal conditions employs directly over 3,900 people in Canada.

Seven hundred and fifty Ford Sales representatives have been established in Canada. These in turn give employment to 4,100 people.

There are also 2,000 other garages pledged to supply genuine Ford parts. These in rendering service to Ford owners employ large numbers of mechanics.

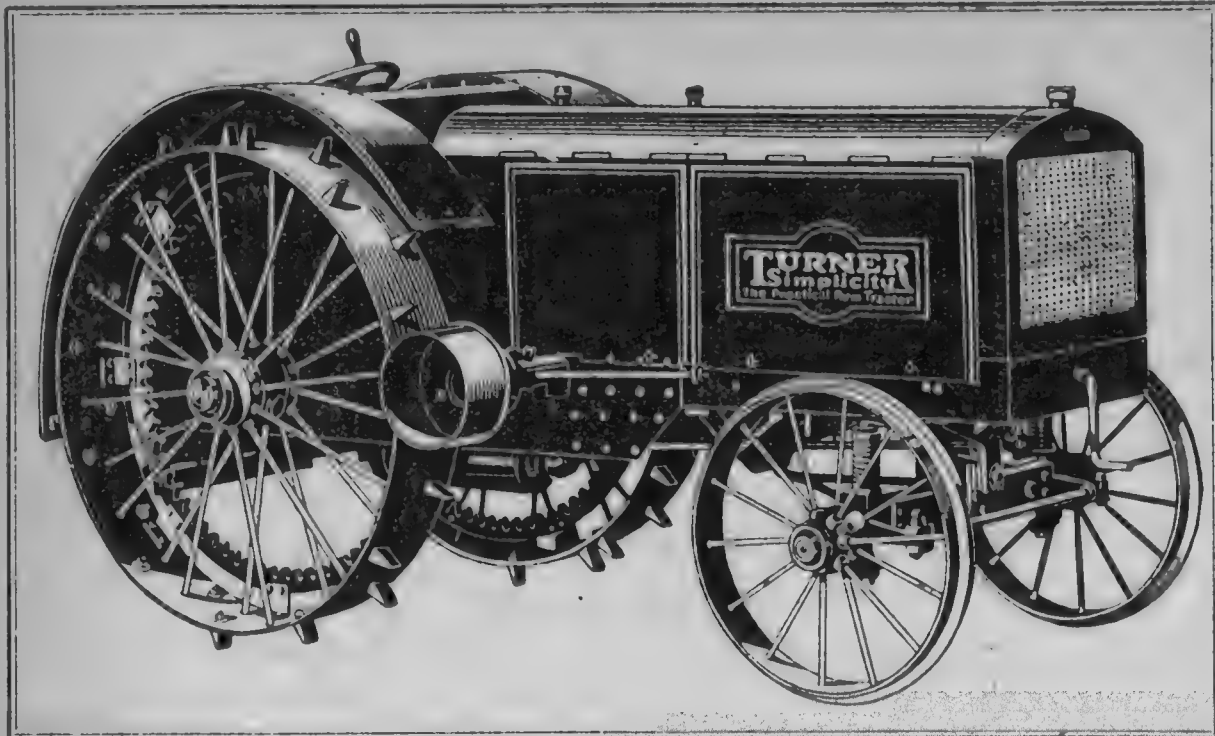
The men who produce Ford Cars are highly paid mechanics, the minimum wage scale at the Ford plant being \$5.00 per day. The yearly pay roll of the Ford Company in Canada is over \$4,000,000. This does not include the wages paid by Ford representatives to their employees, estimated at over \$5,000,000. It does not include the wages that are paid by subsidiary companies and producers of materials for Ford Cars, all of which is due directly to the operations of the Ford Company.

That organization—the men who make Ford products, who render service to Ford owners, is one of the great institutions of Canada.

FORD MOTOR COMPANY OF CANADA, LIMITED, FORD, ONTARIO.







# A Tractor

## This Man Bought a Turner Simplicity Tractor

"Your 12-20 Tractor has given me the very best of satisfaction. I ran a 30-inch Thresher and the Tractor ran like a charm, and I find the Turner Simplicity Tractor a good all-around farm-work tractor, as everybody can handle same, being so simple. I certainly recommend same to every farmer."

Write for our Literature

A good point about tractor value is the simplicity of its construction. If a machine is intricate and is equipped with elaborate fittings, your upkeep cost, repair bill, and operating costs are going to be all the higher. Power is lost through transmission. With the Turner Simplicity Tractor all these are eliminated. That is why operating costs are so low. The operation is made easy and simple.

## The Turner Tractor Sales Co.

Office and Warehouse  
for Western Canada:

195 Portage Avenue East

WINNIPEG

MANITOBA

# The Townsley System

Proper ventilation is the real solution of the stabling problem. Feed, light and stable conveniences are all provided for, but the great essential—fresh air—is too frequently neglected. Stock cannot thrive without sufficient air. A pure atmosphere is as essential to the health of an animal as it is to the physical well-being of men.

## This System Pays for Itself in 3 Years

and the profits go on for a lifetime. This statement is based on the experience of hundreds of farmers who have found it much more profitable to work in harmony with nature's laws.

The Townsley System (Made in Canada) provides an abundance of fresh air, without cooling the stables. With this improved condition the stock make larger gains, and pay dividends on the investment from the day the system is installed. The buildings are preserved from rot—the harness and equipment are saved from ruin by dampness.

## The Outstanding Quality

of the Townsley system places it head and shoulders above all others. The design is one that appeals to any common-sense man as the principles of ventilation are readily grasped. Their scientific application in the Townsley System has been worked out by experts. The materials used in the construction of the system are of the first quality, and first quality only. Every inch of the Townsley is made to rigid standards and specifications.

If you are not certain that your stock is getting a proper chance, write us and send a plan of your barn, or ask for our special plan sheets. We will give you an estimate and full information without any obligation on your part.

Also Manufacturers of the best Lightning Rod System in Western Canada



Made in Canada



Canadian Lightning Arrester and  
Electrical Co. Limited

BRANDON

MAN.

## Making Rubber Goods

They are Made in Great Variety  
in Canada—By R. E. Jamieson

THE rubber industry of Canada can be truthfully said to be one of the largest industries in our Dominion, both from the point of capital involved, turn-over in dollars and cents, and number of people employed.

The variety of goods that are manufactured in Canada in this industry is very great and the uses of rubber in a general sense total the largest amount per capita of any nation in the world.

The industry itself, like many others in other countries, is inclined to be clustered in various parts of Canada; one centre being Granby, Que., another Montreal, Que., one at Toronto, Ont., and one at Kitchener, Ont. These seem to be the centralized spots for the production of rubber goods of various kinds.

## Great Varieties of Rubber Goods

Some of these factories, of course, are exclusive manufacturers, say, for instance, of rubber footwear or tires; others are manufacturers of general rubber goods of various kinds which would include rubber belting for transmission purposes; rubber packings for engine and other kinds of work; rubber hose, such as may be used for conveying of water; steam hose for transmission of steam; air brake hose for use on railway carriages, etc. To this is added pneumatic tool hose used in ship-building; conveyor belts used in mines; rubber goods best suited for pulp mills, such as high grade transmission belting, rubber-covered rolls and deckle straps. Rubber footwear is made in great variety—the greatest variety of any nation in the world, owing to the various climatic conditions which prevail in the different parts of Canada—the heavy and warm goods for the West and for the province of Quebec, medium goods for the maritime provinces and Ontario, light goods and boots for British Columbia's milder climate and for fisheries. Various kinds of automobile tires are manufactured, such as may be suited for the road conditions of the various provinces, and in no country is there such a good selection of tires to be had as there is of Canadian manufacture.

The waterproof clothing industry is a subsidiary industry of the rubber industry, and is showing great progress in Canada, there being factories in Montreal exclusively devoted to this particular work, and the character of goods turned out is second to none in competition with the world.

Special agricultural supplies are being made in various factories to meet the needs of the Middle West, and in truth it can be said that the goods supplied are of such character that Canadians may be proud of the product. During the late war, Canadian rubber manufacturers supplied various character of goods for use by the armies, and the report has come that there were none better and very many not so good. Another item of manufacture in Canada is rubber druggists' sundries, such as hot water bottles, ice caps, hospital sheetings, etc., etc., all of which find a ready sale in Canada.

That it is important in the commercial life of the nation can be well understood, when you consider for a moment that there is approximately \$25,000,000 capital invested in this industry, with an annual output of approximately \$50,000,000, employing about

Continued on Page 76.



Well Within Range



# SURE CROPS AND BIG YIELDS

## A Great Wheat

Thousands of acres fall plowed, spring plowed, and stubble cultivated will be seeded this spring for wheat. The question of variety is of great importance.

### DR. SAUNDERS' EARLY RED FIFE

Has special claims as it grows a good length of straw and usually gives a higher yield and better sample than Marquis on this kind of cultivation. It is as early as Marquis. Dr. Saunders' Early Red Fife should also be tried on the drier and lighter lands, and in districts where the rainfall is light.

#### A PRACTICAL TEST

Mr. Charles H. Smith, of Yorkton, Sask., has been growing and testing varieties for some time, to find the one most suitable for his district. His report, as published in the Yorkton Times, concludes as follows: "On rubbing out 100 heads of each variety of average length, the head measuring three-and-a-quarter inches from the underside of the lowest kernel to the tip of the head, the product of the Marquis heads weighed three-and-a-half ounces, and the product of the Fife heads weighed four-and-a-half ounces. The Fife has much the larger kernel and of true Red Fife form and color." A customer who recently received a shipment from us, writes: "A most beautiful sample, like the good old wheat we used to grow."

Our stock is the genuine original strain from Dr. Saunders. The berry is the largest and finest known. **SAMPLE FREE ON REQUEST**

LOT A—Finest sample, pure and clean. Two bushels, \$8.00; ten bushels, \$39.00.

LOT B—Pure, clean, and high germination, but sample not as fine as Lot A. Two bushels, \$7.00; ten bushels, \$34.00. Finest cotton bags at 65c. each.

## Kitchener Wheat The World's Record Yielder for Hard Spring Wheat

We are sold out of Lot A, but have a limited quantity of Lot B left. Good sample—re-cleaned over our own mills—strong germination and free from weeds—contains an odd kernel of Marquis. Good and sure for general crop and large yield. Two bushels, \$7.00; ten bushels, \$34.00. Finest cotton bags (16-ounce quality) at 65c. each.



SPRING RYE

## SPRING RYE. "It Never Fails." Always sure for Pasture or Hay

The surest crop known for light and thin soils. It may be sown early or late. It matures earlier than Barley or any other crop.

Makes early and good pasture, early and good hay, or may be matured for grain—yields well.

### GROW SPRING RYE

You will always have something even in dry season when other crops fail. Price per bushel, \$2.30. Bags extra, 60c. each.

### Regenerated Banner Oats

Original stock imported from England. Similar to American Banner, but the grain is larger. LOT E—Regenerated Banner—Specially grown, very fine sample, re-cleaned over our own mills—pure and free from all noxious weeds. Our germination test gave 94 per cent. in six days. Price, 3 bushels, \$4.75; 25 bushels, \$39.75; 100 bushels at \$1.50 per bushel. Bags extra at 30c. each.

### Flax

PREMOST FLAX, PEDIGREE No. 25. Price, one bushel, \$4.75; ten bushels and over at \$4.65.

WILT-RESISTANT No. 52. Price, one bushel, \$5.00; ten bushels and over at \$4.90.

SELECTED COMMON. Price, one bushel, \$4.35; ten bushels at \$4.25. Bags extra at 65c. each.

### True English Dwarf Essex Rape

Price, 10 lbs., \$2.30; 25 lbs., \$5.25; 100 lbs., \$20.00. Bags included.

## Red Fife---Registered First and Second Generation

Grow for big yield, and get the product registered and obtain the higher prices. Price per bag of two bushels, \$8.50, bag included.

## Marquis Wheat---Registered First and Second Generation

LOT A—The product from our stocks may be registered, whether grown by a member or non-member of the Association, providing inspection is made and quality satisfactory. Sow this seed and obtain better yield and sell product for registered high prices. Price per bag of two bushels, \$8.00; bag included.

(We do not offer Third Generation Registered Seed—the product of same cannot be registered).

LOT B—Pure selected—grown from Wheeler's Registered Ancestry. Price, ten bushels at \$2.90 per bushel; 100 bushels at \$2.90 per bushel.

Bags (16-ounce quality) at 65c. each.

### Oats

The wise farmer wants seed of strong vitality—he wants a test of 90 per cent. or over in six days. Our stocks are all of this class. They start quick and grow even and strong. Worth more than the difference in cost. It is the good crop that pays.

#### IMPROVED AMERICAN BANNER

New varieties come and go, but the true American Banner still maintains its place as one of the best varieties for this country. No other variety can be obtained in quantity today in such pure form as American Banner, for it has been the popular leader of the Canadian Seed Growers' Association for years, and the genuine highest improved type is found in "Registered" and "Grown from Registered" Seed.

LOT A—American Banner Registered, 1st and 2nd Generation. Per bag of 100 lbs., \$8.25, bag included.

#### AMERICAN BANNER REGISTERED

Third Generation, per bag of 100 lbs., \$7.75, bag included.

LOT B—American Banner, grown from Registered Seed. Per bushel, \$1.80; 24 bushels, \$42.00; 100 bushels at \$1.70 per bushel, bags included.

### Fodder Corn

Our northerly-grown stocks are the best for this country. Germination 90 per cent. and over in six days.

NORTH-WESTERN DENT—Per bushel, \$4.00; five bushels, \$19.50  
MINNESOTA 13 DENT—Per bushel, \$4.00; five bushels, \$19.50  
EARLY LEAMING DENT—Per bushel, \$3.50; five bushels, \$17.00  
Q.P.S.E.—Per bushel, \$3.50; five bushels, \$17.00

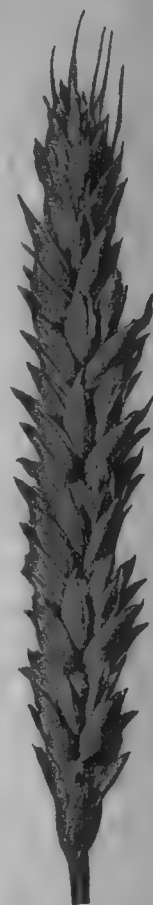
LONGFELLOW YELLOW FLINT—Per bushel, \$4.10; five bushels, \$20.00  
GEHU YELLOW FLINT—Per bushel, \$4.00

Bags extra at 65c. each.

### Sweet Clover

The wonder pasture plant. Will grow anywhere.

WHITE BLOSSOM—10 lbs., \$3.40; 25 lbs., \$8.25; 100 lbs., \$32.00  
YELLOW BLOSSOM—10 lbs., \$3.60; 25 lbs., \$8.75; 100 lbs., \$34.00  
Cotton bags 65c. each.



Head of Early Red Fife from a photograph kindly sent to Steele, Briggs by Dr. C. E. Saunders, the breeder of this variety.



Photo of good crop of Early Leaming Dent.

SEND IN YOUR NAME FOR A COPY OF OUR 1919 SEED CATALOGUE

# STEELE, BRIGGS SEED CO. Limited

WINNIPEG, MAN.



# FARMERS

**MAKE** your banker your financial adviser. Let him help you to shape your affairs so that he will be warranted in giving you ample credit to operate your farm efficiently. Our aim is to assist you in every way possible.

## THE CANADIAN BANK OF COMMERCE

2A

ESTABLISHED 1875

## IMPERIAL BANK OF CANADA

CAPITAL PAID UP, \$7,000,000. RESERVE FUND, \$7,000,000

### RAISE MORE HOGS

To produce more hogs is the national demand to-day. If you require a loan to finance increased production, our local manager will discuss the matter with you.

126 Branches . 48 Branches in Western Canada.

# CROWN LIFE

## ECONOMY AND EARNING POWER

The very favorable Expense Ratio and the greatly improved Interest Rate on investments are notable features of the Company's Annual Report, copy of which will be mailed on request.

**CROWN LIFE INSURANCE CO., TORONTO**  
Agents wanted in unrepresented districts 71

## The Dominion Bank

Established 1871

Paid-Up Capital and Reserve, \$13,000,000  
Total Assets \$125,000,000

Farmers' applications for loans for farming requirements and cattle purchases given special attention. Enquiries invited.

Consult the Manager of any of our Branches

**F. L. Patton** Superintendent of Western Branches **Winnipeg**

## R. S. ROBINSON

Established 1883  
Capital \$250,000.00.

HIDES  
WOOL

BUYER AND EXPORTER OF

RAW FURS

SENECA  
ROOT

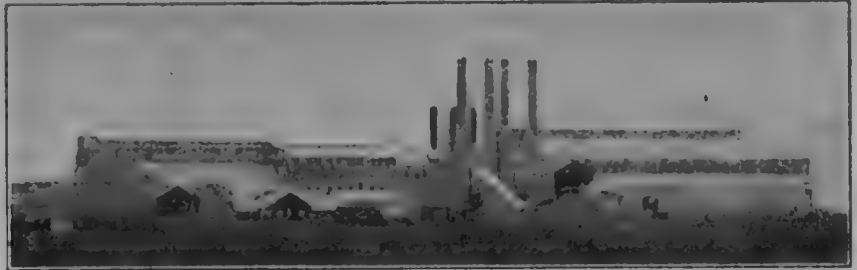
WANTED IMMEDIATELY

No. 1 Extra Large Winter Rats.....\$1.00  
No. 1 Extra Large Fall Rats.....1.50  
No. 1 Extra Large Dark Mink.....13.00  
No. 1 Extra Large Fine Wolves.....22.00  
No. 1 Extra Large Regular Wolves.....20.00  
Frozen Beef Hides......15

Smaller Sizes and Lower Grades proportionately lower.  
Don't Delay while the Demand is Keen.

Head Office: 157 RUPERT STREET, WINNIPEG.  
also 150-152 Pacific Avenue East.

Ship promptly to



The Winnipeg Plant of Canada Cement Company.

## Clay Products and Cement

An Important Branch of Canadian Industry—By G. C. Keith

**C**ANADA'S Cement and Clay Products industries are among the most important utilizing natural resources. In every province of the Dominion, there are clays and shales suitable for the manufacture of Portland cement, brick, tile, hollow ware or terra-cotta. The greatest development has been in Ontario, where a great many plants have been established along the western end of Lake Ontario and extending north towards Georgian Bay. The greatest drain-tile industry is also in Western Ontario, mostly in the natural gas belt. In Manitoba, the construction of the Greater Winnipeg Water District railway from Winnipeg eastward to Shoal Lake, has revealed the presence of brick clay along almost the entire length. Manitoba has a number of well-equipped plants and their number will, no doubt, be increased with the return

### Drain Tile—Ontario

Year	Quantity	Value
1912	10,463,000	\$279,579
1913	16,935,000	292,767
1914	14,710,000	277,530
1915	17,837,000	321,253
1916	16,562,000	302,080

It will be seen that during the war years, production fell steadily. There were no large works and cement and brick were used chiefly in the erection of munition plants and some residences. Drain tile being necessary for large production, there was no drop in the manufacture of these.

The clay products industry was the first to feel the effect of the war, and will most likely be one of the first to feel the return of building operations.

The following preliminary table issued by the Department of Mines, gives the value of the production of cement and clay products in Canada for 1917, 1916 and 1915:

### Value of Cement and Clay Products in Canada for 1917-16-15

Year	Quantity	Value
1917.		
Cement, Portland, .....	barrels 4,768,488	\$7,699,521
Clay products .....		4,003,755
Brick: Common .....		2,017,046
Brick: Pressed and paving .....		589,406
Kaolin .....	Tons 533	9,504
Pottery .....		122,878
Refractories: Fireclay, firebrick, etc. ....		210,838
Sewer pipe .....		728,150
Tile .....		424,465
All other: Fireproofing, hollow blocks, etc. ....		441,369
Sand-Lime Brick .....	12,432,000	143,393

	1916.	1915.
Number of clay product plants operating .....	200	349
Number men employed .....	4,164	4,405
Wages .....	\$ 1,740,900	\$ 1,452,828
Common brick manufactured .....	241,521,177	196,812,067
Pressed brick .....	43,360,573	41,452,148
Paving brick .....	1,589,893	1,227,647
Value paving brick .....	\$ 30,144	\$ 20,698
Value ornamental brick .....	21,103	49,097
Refractories (from Canadian clay only) .....	234,562	110,698
Fireproofing .....	361,555	253,401
Pottery (from Canadian clay only) .....	61,069	61,900
Sewer pipe .....	716,287	799,146
Drain tile .....	357,387	355,296
Kaolin .....	17,500	13,000

of demand for structural materials.

The distribution of both cement and clay product plants, according to provinces, is shown in the following table:

In 1916 there were over 100 brick plants idle in Ontario, the year round, and others worked on a short schedule. This same condition continued through

### Distribution of Cement and Clay Products by Provinces

Province.	Clay Pds. Plants	Cement Plants	Capacity (tons) Cement Plants
Nova Scotia .....	11	1	140
New Brunswick .....	5		
Quebec .....	33	3	16,600
Ontario .....	245	6	12,850
Manitoba .....	12	2	3,725
Saskatchewan .....	13		
Alberta .....	13	4	7,500
British Columbia .....	17	3	5,600
	349	29	53,415

An idea of the production of clay products may be obtained from the following table:

### Sewer Pipe—Value of Production

1912	\$ 884,641
1913	1,035,905
1914	1,104,499

Average of pre-war years, \$1,008,348.

1915	\$799,446
1916	716,287
1917	778,159

Average three war years, \$764,631.

### Building Brick in Ontario—Quantity

1912	385,000,000
1913	408,808,000
1914	294,400,000

Average pre-war years, 362,736,000.

1915	123,977,112
1916	103,854,020
1917	74,179,000

Average three war years, 100,668,711.

### Pressed Brick in Ontario—Quantity

1912	65,598,000
1913	81,233,000
1914	61,934,000

Average three pre-war years, 69,580,000.

1915	43,504,736
1916	37,281,665
1917	35,203,000

Average three war years, 38,996,467.

1917 and 1918. The general increased cost of production raised the average price of common brick from \$7.96 per 1,000 in 1915 to \$8.43 in 1916. This was still higher in 1918. The cost of coal and labor was responsible for the increase. The wages paid in 1916 amounted to \$472,044 and the industry employed 1,329 men.

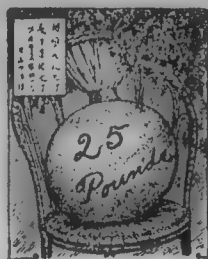
Three Ontario sewer pipe companies made sewer pipe to the value of \$206,901 in 1916. The net production marketed that year was valued at \$216,749. Employees numbering 169 were paid \$111,644 in wages.

Five Ontario pottery firms produced pottery worth \$87,025, gave employment to 47 men, and paid out \$32,019 in wages.

In 1916 the barrels of cement marketed by the Ontario cement factories were 2,143,949, valued at \$2,242,433. There were 244,000 cement brick and blocks worth \$10,648 produced, and 1,718,000 land tile and sewer pipe valued at \$46,946. This latter industry employed 73 men who received \$15,512 in wages. The following gives some statistics of the industry in tabular form, from provincial reports—

Continued on Page 68.

## New Japanese Giant Radish



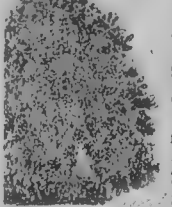
This is the great Sakurijima Radish from Japan. The largest radish grown, often attaining the enormous weight of 15 pounds, and sometimes 20 or 30 pounds.

It is a real "novelty" to most Americans, and the taste will immediately convince anyone of the fact that it is not merely a curiosity but a radish of extraordinary quality. The flesh is solid, firm and brittle, and of most excellent flavor. It will grow and thrive in any soil or climate.

This is a radish that can be planted in the spring and eaten all summer long, and can also be kept through the winter if dug in the late fall and buried in a box of dry sand in the cellar. As a summer radish it is a wonder, as it will grow and thrive when it is so hot and dry that common radishes would be a failure. By all means try the Sakurijima Radish and you will be surprised at the real value of this monstrous variety. Send for package of the seed today, before it is all gone. Package,

10c., or 3 for 25 cents. Alvin Sales Co., Dept. 62, P.O. Box 56, Winnipeg.

### NEW GARDEN HUCKLEBERRY

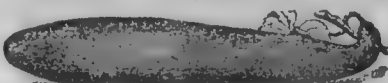


Grows from seed the first year. A new fruit that cannot be excelled for Pies and Preserves. It is very prolific, yielding an immense crop of fruit. It is an annual and must be planted each year from seed. Grows and thrives in all climates and on all kinds of soil. The fruit grows larger than the common Huckleberry or Blueberry. If cooked with apples, lemon or anything sour, they make the very finest jelly. You will be delighted and astonished with this easily grown and wonderful novelty. Send your order today. Packet of seed, 10c.; 3 of one kind, 25c.; postpaid.

**VINE PEACH**  
RIPE FRUIT IN 30 DAYS AFTER SEED IS PLANTED

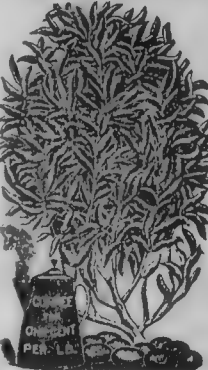


This wonderful Vegetable Peach is the most beautiful of all vegetables. They resemble oranges in color, shape and size, and grow on vines like melons. They present a beautiful and tempting appearance when canned; make delicious preserves and sweet pickles; and are fine for pies. There is nothing like them. Extremely early of the season culture and very prolific, covering the ground with golden fruit. They grow from the seed in 30 days. A package of the seed will be sent postpaid for 10c.; 3 packages of one kind, 25c.



**BANANA MUSKMELON.**—This melon surpasses all others in its delicious fragrance. The flesh (the melon being nearly solid) is of a rich salmon. The quality is excellent when the melon is thoroughly ripe. It grows from 18 to 36 inches in length and from 3 to 4 inches thick, and is very prolific. It grows almost like an overgrown banana and smells like one. Has a flavor all its own. Don't fail to try it. Packet, 10c.; 3 packages of one kind, 25c. Alvin Sales Co., Dept. 62, P.O. Box 56, Winnipeg.

### COFFEE ONE CENT PER POUND



Grow your own coffee and cut down the high cost of living. The New Domestic Coffee Berry makes a delicious, nourishing drink, to take the place of injurious coffee. It is a pure food drink that gives health and strength to young and old. Thousands pronounce it as good or better than the best coffee. It has the rich, deep brown color of old Java. One of the hardiest, easiest grown, and most productive of all plants. Can be successfully grown in any climate, and is sure to ripen even in the extreme North. As easily grown as corn or beans, and does well on all soils. Thousands suffer untold injury from stale coffee. Better grow the new kind and save your health and money. Send only 25c for 3 packets, or 14 for \$1.00, postpaid. You can raise all the coffee you want for your own use and sell the balance to your neighbors. Prepared like any other coffee. Full directions with every packet.

### GROUND ALMONDS



Grow them in your garden. A delicious nut, with a flavor resembling the Coconut or the Almond. The meat is snow-white, covered with a thin shell or skin of brown color. It grows close to the surface, is very prolific, a single nut yielding from 200 to 300 nuts in a hill, and will do well in any kind of soil. If the nuts are planted in the spring, the same as potatoes, a big crop can be expected about potato harvest time. They grow so rapidly and produce such immense crops that you will be surprised. Plant some for the children. Everybody likes them. Send 25c. for 2 packages of these nuts, so you can grow some in your own garden; or send 50c. and get 5 packages.

Or order 5 packages of Almonds and 7 packages Coffee for \$1.00, postpaid. Alvin Sales Co., Dept. 62, P.O. Box 56, Winnipeg.

### MAGIC GARD AND ROSE



In full view of the spectators, you can change this card into a beautiful rose, and while the people are still wondering, you again transform the flower into a card again. The illusion is perfect; you can have your sleeves rolled up to show that there is no "sleeve-work" about it. Prices, with full instructions and secret, only 25 cents, postpaid. Alvin Sales Co., Dept. 62, P.O. Box 56, Winnipeg.

# ON the outskirts of the city— in a meadow—where the sun shines brightly, the birds sing and the air is pure and fresh—there stands a great snow-white palace—the home of McCormick's Bis- cuits—the finest biscuit plant in America. With our unsurpassed facilities it is natural to expect McCormick's Jersey Cream Sodas to be the finest in the land.

Sold fresh everywhere. In sealed packages.

## McCormick's Jersey Cream Sodas

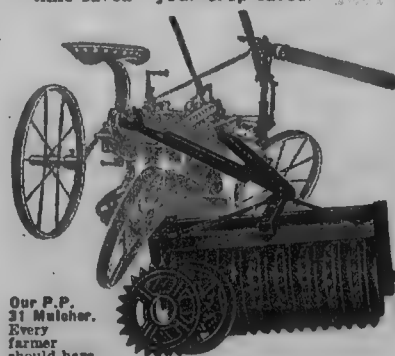
Factory at LONDON, Canada. Branches at Montreal, Ottawa, Hamilton,  
Kingston, Winnipeg, Calgary, Port Arthur, St. John, N.B.

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## BETTER FARMING means Bigger Crops

You are vitally interested in the results from your own crop. The greatest yield off the smallest acreage is what appeals to you. To get real results you must conserve every particle of moisture—you must cultivate and prepare the seed bed—you must prevent soil drifting, our machines do all this.

You can get a good crop in the dry seasons—use our plow-attached packers when you plow—they save the moisture—the seed bed is prepared—one operation does it all—labor saved—time saved—your crop saved.



Our P.P. 31 Mulcher. Every farmer should have at least one of these. They will pay for themselves many times over each season. No extra horse needed.



Our 15-ft. Model, Weight 2,000 pounds, used Before and After Seeding.

Our 11-foot and larger are built in sections so they may be used with tractor or horses; pulley hitches and adjustable poles are regular equipment. Our patented ever-lubricated sleeve axle—the strongest and lightest axle ever constructed—means easy pulling.

Write for Catalog or see your dealer.

Our Catalog tells all about our labor-saving and improved farm tillage machinery that solve your problems. You owe it to yourself to get a bumper crop this year. Remember—our packers are not like the old types. Four horses handle with ease our 15-foot model. We make Mulcher Surface and Sub-surface types.

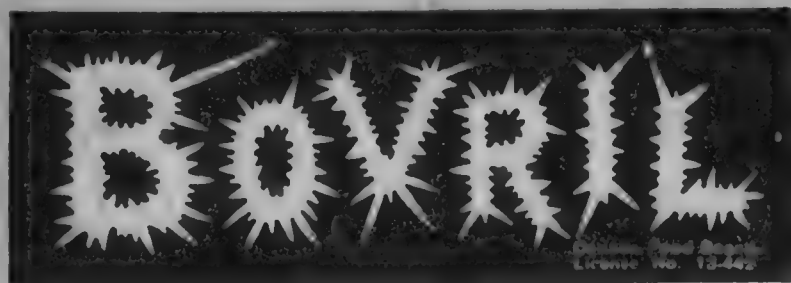
Our Mulcher Packers do Wonderful Work After Seeding. They will Save the Moisture.

You deal with the Canadian Factory.

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—IMPLEMENTS LTD.—  
WINNIPEG, MAN.

FACTORY: OWENA ST., WINNIPEG





## BLUE RIBBON TEA

There are enough worries in the world without having to drink poor tea—may as well have the best.

Try BLUE RIBBON

### A Bank Account and An Insurance Policy

From the "Chronicle"

**The Savings Bank** The savings banks of the country have their uses and are of incalculable value to any community. They encourage habits of thrift, and assist in training people to be self-reliant and helpful. They discourage extravagance by inducing people to husband their resources, and tempt them by payment of interest to allow their earnings to accumulate. But in addition to the bank account there should be a policy in a well selected and carefully managed life company.

**The Life Policy** Let any man early in life place fifty dollars per annum in a savings bank, and a similar amount on a life policy, and even if he lives to a green old age, this life insurance premium will produce the best results, while all the time it possesses this enormous advantage:—His fifty dollars in the saving banks will produce the amount deposited, plus the interest, should he die during the year, while the amount invested in life insurance, would produce at least a couple of thousand dollars.

Have a Bank Account AND an Insurance Policy. But anyway—An Insurance Policy.

**The Mutual Life**  
Assurance Company of Canada  
Waterloo, Ontario

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### PERCHERONS

Registered Mares showing heavy to foal to heat sire; weaning and yearling fillies. Ten Mature Stallions ready for heavy breeding season, and the younger age. (Given ourselves, the ancestors for five generations on dam side, sires imported)

FRED CHANDLER, 27, CHARITON, IOWA

### BELGIANS

Direct Below St. Paul



## The Sugar Business of Canada

By J. L. R.

THE Canadian consumption of sugar is of course a varying factor, but despite these variations Canada can be considered as a very large consumer on a per capita basis, and moreover a growing consumer. The latest figures available for a yearly consumption are those of 1917, when the total of 314,464 long tons was reached. This was an increase of ten per cent. over the previous, and though 1918 consumption will, unquestionably, fall below this figure, the decline can not be considered as the result of a falling demand, but as the result of uncertain supplies. While the general increase of consumption over a number of years is a steady growth from the 208,709 long tons of 1908 to the present figure, a growth that suggests still further possibilities of expansion.

The sugar business is divided into two heads, cane sugar and beet sugar. The latter only is an entirely native product. In the nature of things only beet sugar could ever be entirely produced in Canada. While this is a fact, it is also a fact that only approximately five per cent. of the sugar consumed in Canada is of the beet variety. The reason for this can only be that the production of sugar beets has never been seriously considered by the government or the farmer. Even despite this comparative lack of interest however in the growing of sugar beets, the industry is developing, and will this year set a new record. The out-turn during this present crop which is already under process, is estimated at 17,000 tons of 2,240 pounds, as against a 1917 out-turn of 11,250 tons and a 1916 out-turn of 12,500. The value of sugar beet crops for the season of 1918 is given by the Bulletin of Agricultural Statistics as \$1,845,000, and the gross production at 189,000 tons. This is the lowest item on the list of field crops, very much the lowest, but it is a growing production. The conditions that have prevailed in sugar in Canada during the past year, have brought forcibly to the public attention, how much Canada is dependent on outside sources of supply, over which it is not possible to obtain any measure of control.

#### The Future Source of Supply

Considering the fact that half the world's sugar supply is of the beet variety and that more than half of this amount is produced by Germany and Austria, it is evident that the world must look to these countries and to Russia, another large producer, for their supplies. Russian production at the moment is practically nil. Germany and Austria will probably produce only sufficient for their own needs, and may even become a buyer of sugar. France, Belgium and Italy, whose beet fields have been devastated by war, will also be buyers rather than exporters. So it is that there never was a time when high production was so imperative, or when profitable production could be so confidently expected.

There is no reason whatever for the limited production of sugar beets in Canada. There is practically no limit to the production areas here. Generally speaking any soil capable of producing a good crop of potatoes or corn, will, under proper cultivation, yield satisfactory crops of sugar beets. The average price per ton of beets has been, during the past year, around \$10.25, and the production per acre, taking the Ontario Agricultural College five-year average is 20.68. That is an indication that beets can be grown profitably, and that the possibilities of this native

Canadian industry are almost limitless.

It would take about 1,000,000 acres, however, under beet production, to meet the total Canadian consumption of sugar. This is of course neither possible nor necessary, for the cane sugar refineries are another exclusively Canadian industry. The amount of manufactured sugar entering Canada is a negligible factor, the amount of beet sugar is approximately only five per cent. of the consumption, the bulk of the sugar production therefore depends on the cane sugar refineries.

In Canada sugar refining was one of the earliest commercial industries, a refinery at Montreal having been founded prior to Confederation, when manufacturing in Canada was in its infancy. Since then it has grown to an industry of very considerable importance. Owing to the fact that the bulk of the Canadian supply of raw sugars is drawn from the West Indies, and from Cuba, the bulk of the refineries are situated within a reasonable distance of the Atlantic seaboard, at Halifax, St. John, N.B., and Montreal. On the Pacific coast there is a refinery that draws its supplies from Hawaii and the East Indies.

#### Demand Rising

As has been stated these refineries have handled in recent years a production of somewhere in the neighborhood of 300,000 long tons, or roughly 672,000,000 pounds. This does not, however, represent their maximum output. Irregularity of supply, especially during the war years, has occasioned frequent closing of the plants, while even in more normal times the plants have not operated up to their maximum output. As a matter of fact the maximum output of these plants without any elaboration of equipment would take care of almost twice the present consumption.

As matters now stand, therefore, it is not a question of production but a question of demand and of raw supplies. As far as demand is concerned there has been a gradually mounting consumption, especially has this been the case during the war years, and the three years preceeding. It is unquestionable too that this is only the beginning of a largely increasing demand. The per capita consumption of sugar in the United States, is considerably larger than that in Canada, and the living conditions in the two countries are approximately the same, so that it is a reasonable assumption that under normal conditions of price and supply, Canadian consumption will increase. The general enlargement in the industries depending largely on sugar, of the candy and confectionery industry, the chocolate and biscuit manufactures, and so on, indicate another growing source of demand.

The question is therefore largely one of supply. For the past few years there have been abnormal conditions in operations. Germany and Austria, large producers and exporters of beet sugar, have been out of the market, and other European production has been materially curtailed. The world's need therefore has fallen mainly on the Western hemisphere, on Cuba, the largest single exporting country of the world, and on the West Indian Islands. This has been partially due to the shipping situation that precluded the possibility of moving a heavy production in Java. As a result the world has been on short

Continued on Page 67.



Sugar Refinery Located at Montreal.



## Sensible Half-Soles

There's a heap of good value in Neolin Half-Soles. They have such sensible qualities.

*Long Wear* that gives economy. As Neolin Soles add life to new shoes, so Neolin Half-Soles mean months more wear from worn shoes.

*Comfort*, too. For all the wear in Neolin Half-Soles has not made them stiff and heavy. They're light and flexible. They make tramping over fields and around the yard easy on the feet.

Resist slipping, too. Don't grow slippery from stubble. Save many a slip and fall around the barn and machinery.

It's easy to equip every worn pair of shoes in the house with Neolin Half-Soles, nailed or sewn. If you are accustomed to repairing your own shoes, buy Neolin Half-Soles at the hardware or general store, or take the shoes to your repair-man and he will equip them with Neolin.

But be sure you get real Neolin. See the name "Neolin" on the bottom of the sole.

The Goodyear Tire & Rubber Co. of Canada, Limited

# Neolin Half Soles

### My Book



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My free book will amaze you. See the big money that is being made by those I taught my famous system of horse breaking and training! Wild colts and vicious, unmanageable horses can be picked up for a song. By my methods you can quickly transform them into gentle, willing workers and re-sell them at a big profit. You can also earn fat fees breaking colts and training horses for others.

Write! My book is free, postage prepaid. No obligation. A postcard brings it. Write today. Prof. JESSE BEERY, 63 Main St., Pleasant Hill, Ohio

**POULTRY BOOK** Latest and best yet! 164 pages, 215 beautiful pictures and color plates. Shows how to raise poultry for profit. Tells how to select, breed, feed, and manage poultry. Includes recipes for poultry dishes. This practical book worth dollars mailed for 10 cents. Berry's Poultry Farm, Box 61, Clarinda, Iowa

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**BROOKS' APPLI-**ance, the modern, scientific invention, the wonderful new discovery that relieves rupture will be sent on trial. No obnoxious springs or pads. Has automatic Air Cushions Binds and draws the broken parts together as you would a broken limb. No salves. No Hes Durable, cheap. Sent on trial to prove it. Protected by U.S. Patents. Catalog and measure blanks mailed free. Send name and address today.

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and receive full market value

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### Make Big Money Boring Wells

Have water on your own farm. In spare time make wells for your neighbors. It means \$1000 extra in ordinary years, double that in dry years. No risk—no experience necessary.

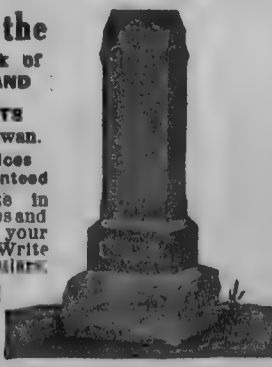
**Complete Outfit for Getting Water Quickly Anywhere** Includes boring rigs, rock drills, and combined machines. One man with one horse often bores 100 feet or more in 10 hours. Pays 50c to \$1 per foot. Engine or horse power. Write for Easy Terms and Illustrated Catalog. Lisle Mfg. Co., Clarinda, Iowa. Address: Saskatoon, Sask. Dept 160

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Lowest Prices Work Guaranteed We specialize in Mantels, Grates and Tiling for your new home. Write us for particulars.

REGINA MARBLE & TILE LTD. 764 Century Ave. Regina, Sask.



### For Sale

Fully equipped 720-acre Farm 10 miles from City of Winnipeg, 2 miles from loading platform.

Four hundred acres cultivated, all fenced, good water, first-class buildings; equipment in part consists of: About 75 head Shorthorn grade cattle; about 20 horses; also hogs, hens, etc. Full line of farm implements, including Case Gas Tractor and plows. This farm will be sold on easy terms, at a reasonable price, to a good practical farmer who can demonstrate his ability to handle a proposition of this kind.

An exceptionally good chance to get a good farm close to the West's best market.

Apply to owners:—

Osler, Hammond & Nanton WINNIPEG

### Got Gophers?

### Kill-Em-Quick

For Information see KILL-EM-QUICK AD. on Page 98 of this Issue.



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## For City, Village and Farm

The ideal instruments for local or long distance work. Equipped with the big powerful five bar generators which always ring every bell on the line every time, and the remarkably efficient new transmitters and receivers which carry the voice distinctly no matter what the distance or weather.

### 1919 Models Now Ready

Equipped with lightning arresters, battery savers and many new features that make Stromberg the real telephone of service.

#### Send for Free Book No. 94

Shows you how to install and take care of your telephones—tells how to organize a party line among your neighbors and explains just how to get started. Gives valuable information about all Stromberg Telephones and shows how our experience gained in building over 2,500,000 telephones is of great importance to you.

Send for this free book and put your telephone problems up to our engineers—we will plan your system and furnish estimates without cost.

Midland Electric Company Limited,

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Regina, Canada.

# BEAVER KEROSENE TRACTOR

## The Drive that Pulls SEVEN SPEED FRICTION TRANSMISSION

"Perfectly Satisfactory"

Read the verdict of Beaver Owners

Fort Qu'Appelle, Sask.,

Nov. 19th, 1918  
"Would advise any person contemplating the purchase of a tractor to look up this make of a tractor, as my experience with this has been everything that it could be in the line of satisfactory work."

(Sgd.) A. B. May.

Sedley, Sask., Nov. 24th, 1918

"Just a line to let you know that I have been getting along all O.K. with the Beaver tractor. Have double disced 180 acres, and plowed about 60. I did not have anything but a five-furrow engine disc plow, and she pulled it fine. I was pleased to get the advice on friction drive because I have taken care of it, and it is as good as ever, and it is the greatest thing I ever saw."

(Sgd.) J. W. Pugsley.

Ellisboro, Sask., Nov. 18th, 1918

"In reply to your letter of the 12th inst. regarding your Beaver friction drive tractor. I might say it has given entire satisfaction to date. We have only plowed 20 acres of breaking, which was dry and stony, using a 2-14" breaker bottom, which she handled nicely at a total cost of \$1.75 an acre covering everything. The friction drive is certainly handy, having no gears to shift or strip."

(Sgd.) Robt. McLean.

Vantage, Sask., Dec. 3rd, 1918

"As to breaking when there was not a sign of moisture in the ground or any other place—or in other words, bone dry—I did work second to none with the Beaver, and as to the friction drive I have had no trouble whatever with it, and I am thinking this should be less trouble than a lot of gears."

(Sgd.) Gust Shonblom.

Moose Jaw, Sask., Dec. 9th, 1918

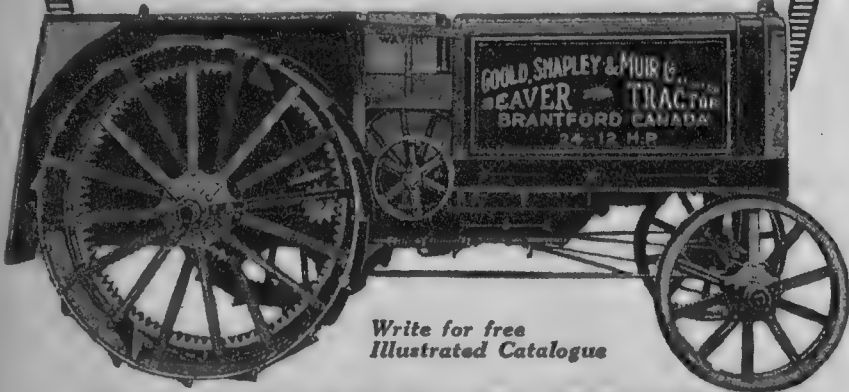
"The Beaver tractor which I bought from you this summer has given entire satisfaction. I plowed 150 acres of land which was a subdivision, and had actually gone back to prairie grass. Part of this land had not been plowed for nine years. This tractor handled three disc plows seven inches deep, and I consider had power to spare."

(Sgd.) Chas. White, Box 1373.

Meyronne, Nov. 30th, 1918

"I think it is only fair that I should let you know that I am dead in love with my Beaver tractor, 12-24, which I purchased from you. No need of saying much about the Waukesha Motor, as there is no better. The friction drive on the Beaver is in fact what I like the most. It is so simple to operate, and with all the work I have done my fibre seems in better shape than when I first started up."

(Sgd.) A. J. McKee. 3



Write for free  
Illustrated Catalogue

Goold Shapley & Muir Co. Limited

Brantford Portage la Prairie Regina Calgary

Good, Big, Thick-Made, Heavy-Boned, Sound

PERCHERON, BELGIAN and SHIRE STALLIONS, \$500 to \$1,000. Mares, two to seven years old, weight up to 2,150, \$300 to \$750 each. (Load of young Scotch-topped Cows in calf, \$175 a head. Spend some of your fare and save \$200. I will treat you so you will come back. Write me. R. S. THURSTON, OSCEOLA, IOWA.

# The Canadian Chemical Trade

Its Relation to Agriculture—By Thos. H. Wardleworth

THE farmers of Canada cannot readily realize the extent to which they are indebted to the chemical trade for much that is essential in these days, to the successful operation of the farm. Little do they imagine that the smoking chimneys of the town and city which greet their eyes, as they travel through the Dominion, represent labor which is being spent on their behalf. The turning wheels and the drifting smoke speak to those who know of fertilizers—the superphosphates; artificial guano, compounds of nitrate of soda and sulphate of ammonia and other important vitilizers of the soil; of insecticides and fungicides; paris green, arsenate of lead, sulphate of copper (bluestone), formaldehyde; of the manifold agricultural machines and appliances for the farm. This all means work for thousands of fellow Canadian citizens who in turn, form a constant and continuous market for the products of the orchard and farm.

Of late years the contribution of chemistry to the development of the farming industry has been enormous—especially during the last four years. The speeding up of production has necessitated that nothing should be lost that can be saved, and the chemist has had to play his part in the general scheme for greater output of munitions and food.

### Formaldehyde from Hardwood

It is gratifying to know that Canada can produce all the Formaldehyde required by the greatest possible extent of grain sowing in the Dominion, and the product is of the finest quality. The war has made great demands for this article, but the government and the manufacturers have wisely set aside sufficient to meet the needs of the grain growers, so that there may be no shortage of this essential foe to "smut." It may interest the farmers to know that Formaldehyde is produced from Methyl Alcohol, which is made by the destructive distillation of the hard woods of Canada, and it is entirely a Canadian product. The Standard Chemical Company of Toronto, in whose hands this business is confined in Canada, produce also in their various plants enormous quantities of Charcoal, as well as the Wood Alcohol, Acetic Acid, Acetone, Acetate of Lime and Soda, and Pyroligneous Acid. The last named acid is largely used as a preservative of fish and various forms of animal flesh, having replaced to a large extent the old-fashioned method of smoke-curing meats.

Then as to Insecticides; the importance of the large quantities of Canadian Arsenic must not be overlooked. The Cobalt regions have provided Canada now with a very abundant supply of Arsenic, and this renders the production of Paris Green and Arsenate of Lead essentially Canadian industries, and the manufacturers are able to supply the farmers and fruit-growers with these Insecticides not only made from Canadian labor, but also from Canadian raw materials.

Sulphate of Copper (Bluestone), is not produced in Canada in sufficient quantities to meet the demands for it, but as a compensation the call for it has fallen away of late years, and production has somewhat increased—and this increase could be augmented should the need arise for its greater use as an insecticide or in the industries.

### Artificial Fertilizers

Fertilizers are in most cases within the province of the modern chemist, and many important factories are established in this country for the manufacture of the various fertilizing compounds. Sulphuric Acid is largely used in making artificial manures and the farmers may be comforted by knowing that, owing to the activities of the Imperial Munitions Board and the regular acid manufacturers, there is now capacity for the out-turn of Sulphuric Acid much in excess of Canada's needs for years to come. Sudden cessation of hostilities has left a very large surplus stock of Nitrate of Soda in Canada at the present time, namely, over 18,000 tons, and it is to be hoped that the government may find some way of mak-

ing this valuable fertilizing agent readily accessible to the farmers.

Potash is much desired for some crops and the stoppage of supplies from Germany has caused extended investigations to be made. One new source has been found in unexpected direction. A cement manufacturing plant in the United States was threatened with action because of the fumes and dust which were thrown out by the mills. An effort was made to suppress the cause of offence by precipitating the fumes and dust. Upon analyzing the resulting deposit, the chemists found that it was rich in Potash. This meant that the collection of the waste products and the stoppage of a nuisance was not an additional expense to the cement manufacturers but was really a new source of income. The Canadian government is now encouraging this Potash recovery in the Canadian plants, and we may soon see Potash products turned out by our own cement works. This is a subject of congratulation, because our old supply from the ashes of hard wood has sunk to insignificant proportions and must be a steadily declining source of supply. Many are the efforts which have been made to set free the stores of Potash locked up in the Canadian feldspars, but so far with no success, though some day it is to be hoped some fortunate individual will solve the problem to his own profit and the great benefit of the nation at large.

### Salt and Soda

Of late years considerable attention has been paid to the development of our sources of Soda, and we are now able to say that at Windsor, Ontario, ordinary Table Salt, or Chloride of Sodium, can be produced equal to any offered in the world. This salt-making plant also produces Caustic Soda and Soda Ash, which are so largely used in industrial processes, particularly in soap-making, and the output promises to be increased very materially in the future. So confident are chemical manufacturers of the future of the demand for Soda Caustic and Soda Ash that the Brunner Mond Company, of England, is erecting at Amherstburg, Ontario, a large plant which will be in operation during 1919 for the production of Soda Ash primarily, and later the company will produce Caustic Soda and Soda Bicarbonate. As Soda Ash, Caustic Soda and Bicarbonate of Soda are now imported in large quantities, we can look forward with pleasure to the fact that we shall be able to produce these in the Dominion of Canada, and thus find employment for a much larger number of men. The Windsor Salt Company, in addition to the production of Soda Salts, in the breaking up of ordinary salt by electrolytic methods, have an output of a large quantity of Chlorine, which the manufacturers utilize by manufacturing Chlorinated Lime, or ordinary "Bleach," which is so useful as a disinfectant or as a bleaching agent in the textile manufactures. Bleach has been largely imported in the past, much of it coming from Germany.

Epsom Salts or Sulphate of Magnesia, has been imported in large quantities in the past. The difficulties of transportation and other disturbances caused by the war has caused the investigation of many of the Saline lakes of Canada, and it is possible that many of the stretches of water in the West and North-west, which have been of no value, or a source of danger, may become the point of production for large quantities of very good Epsom and other Salts of Canadian origin. The indications for the future are that either by factory-made Epsom Salts, or by the development of our Saline resources, we shall be a self-supplying nation.

Canada now possesses three Glycerine distilling plants, one each at Montreal, Toronto and Hamilton. The total production of Glycerine in Canada ranges from six to seven million pounds per annum, slightly more than one-half of which is dynamole grade, for the manufacture of explosives, and the balance is refined for pharmaceutical and ordinary industrial purposes. The importance of Glycerine to the farmer may not at first be apparent, but it has

Continued on Page 67

## Canadian Salt

How and Where It is Made—By  
E. G. Henderson

**T**HE use of salt extends beyond written history, and is one of the commonest substances known to mankind. As we are chiefly concerned with the use of salt for domestic use, we will not mention its use for the manufacture of chlorine, caustic soda, soda ash and many other of the most important chemicals in daily use.

Salt is required both by man and animal. The savage uses salt in his primitive cooking, and the refined cooking of the most civilized also requires it. Wild animals travel long distances in order to reach the "salt licks," which are found in all uninhabited districts.

Salt which is used for domestic purposes is evaporated from brine, either natural or pumped from wells drilled to the solid rock salt, the brine being purified by settling; and in some cases by the use of chemicals. It is then dried, either naturally or artificially, and if for table or dairy purposes, sifted and packed in various sized packages, suitable for the purpose intended.

### The Evaporation Process

There are various methods in use for the evaporation of salt. The old English pan system, which makes a large and uneven grain of salt, was formerly much used by meat packers. This method is not only an expensive system, but unsatisfactory, owing to the lack of control of the heat, the furnaces being directly under the pan. Another and more satisfactory system is that known as the "grainer," which consists of long, shallow tanks, in which are placed a number of steam pipes, supplied either by exhaust or live steam, and the temperature of which can be kept under complete control. Grainer salt has practically taken the place of that formerly made in the English pans.

About 25 years ago a vacuum pan system for making salt was installed for the first time in Canada, and indeed in the British Empire, at Windsor, since which three other plants have been equipped with systems somewhat similar. The plant at Windsor has improved the original invention and for some years has used what is known as a "compound double effect system," and have not only the most modern, but the largest plant in the Dominion.

Salt manufactured by the vacuum system is of a most uniform grain, consequently dissolves evenly and is the best, not only for use in dairies and creameries, but also for cooking purposes, including baking.

### Uses of Salt

For table use the finest grain of vacuum salt, specially prepared, is mixed with less than one per cent. of a harmless substance, magnesia, in order to prevent absorption of moisture, and is packed in moisture-proof containers, generally provided with a convenient spout for filling salt cellars, etc.

Butter makers and cheese makers cannot be too careful in their selection of salt, and none better than made in Canada is to be obtained anywhere. Bulletin No. 385, issued by the Inland Revenue Department, in October, 1917, states that "table salt as found in Canada is a very satisfactory article." As salt absorbs odors very easily, it should be stored in a dry place, apart from vegetables or anything likely to taint it.

Salt is necessary for cattle. Sheep are especially fond of it. Dairy cows require a daily ration; indeed, experiments at the Wisconsin Experimental station showed that cows from whom the daily ration of salt was held declined both in weight and yield of milk. Horses have a great desire for salt and it should be supplied to them regularly. Pigs need less salt than other domestic animals, but without it they cannot be kept in a healthy condition. Certain soils require salt, the use of which increases the yield; for asparagus beds it is absolutely necessary.

# Maltum Stout

REGISTERED



### A BED-TIME TREAT

A N hour of quiet enjoyment—your favorite book, a fragrant smoke and a delightful bottle of Maltum Stout

MALTUM	MALTUM STOUT	ALS
6 Dozen Quarts (barrel)		\$14.50
10 Dozen Pints (barrel)		14.50
1 Dozen Quarts		3.00
2 Dozen Pints		3.00
1 Keg		6.00
1 Keg		6.00

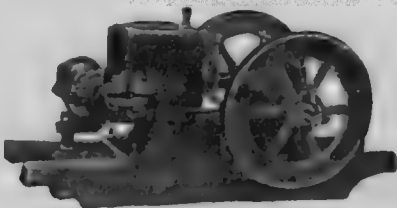
Refund—\$3.00 on 1-Keg; \$2.00 on 1-Keg; 50 cents per dozen quart bottles, and 50 cents per dozen pint bottles.

Cash must accompany all orders. Order from your Grocer, Druggist, Confectioner, or direct from

**E. L. Drewry, Ltd., Winnipeg**

## How About That Fanning Mill?

I can run it for you cheaper than you can run it by hand. I can also pump your water, run your churn, drive your washing machine, emery grinder, turn your cream separator daily, and do a multitude of other chores around the farm during your busy season. This will let you spend another hour or two in the fields.



I will do two hours work a day at an expense of five or six cents per hour. I will last for ten years at least, hence I am indispensable. My repair bill is light and anything I am in need of can be gotten at once at my home.

(Signed) The Little Peerless.  
1 1/2 H.P. Four-speed Manitoba Engine, equipped with Webster Self-starting Magneto.

## Manitoba Peerless Windmills

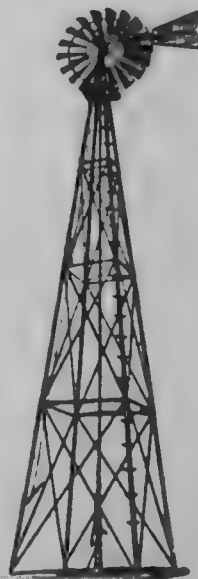
Last season, we introduced a 5-ft. back-geared, steel windmill, with three-post, 5 1/2-ft. girted side ladder tower; two heights, 20 ft. and 31 ft. Especially adapted for pastures and shallow wells.

Note what this dealer reports. He installed several last year:—

"I am sending you by mail today, a roll of films, showing several views of your 5-ft. windmills. This mill was sold to Mr. J. L. Cohen, Carleton Place, and is giving perfect satisfaction."

"T. H. Mcgregor, Carleton Place, Ont."

Dealers in position to quote you are located throughout the West. If unable to get in touch with one, write us.



Let Nature Do Your Pumping

So easily erected anyone can do it without tackle or other expensive equipment.

**MANITOBA ENGINES LIMITED**  
Brandon :: :: Manitoba



## The Phone for My Home



Two of the biggest assets of the home—comfort and safety—are more likely to be liabilities unless they are preserved and promoted with that wonderful instrument—the telephone.

When sudden illness develops you can call the doctor and necessary aid.

Distant communities are made intimate neighbors. Outlying districts are brought close to the heart and business life of the town and city. The farm, the town and the city are put into close relation.

Be a part of the community in which you live. Get in touch with your neighbor. Get the current prices on all marketable products. Keep in touch with the social as well as business activities. The telephone enables you "to get in on" many a quickly planned party.

## Kellogg Telephones

make telephoning a pleasure. Kellogg equipped lines are built right from one end to the other, insuring perfect service.

The Kellogg phone lowers maintenance costs, which in these times of prohibitive prices is a decided advantage.

The transmitter is one of a type of which there are nearly 3,000,000 in service today.

The generator is most powerful and will ring all the bells even with 40 telephones on the line.

The receiver shell and mouthpiece are made of Kellogg Bakelite, the new durable insulating material.

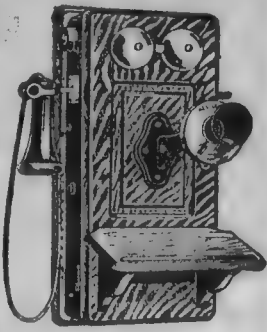
The ringer gives a loud, clear, pleasing tone and absolutely will not stick. It is non-adjustable and will not get out of order.

Lightning arrester protects the phone from lightning and all high voltage currents.

You are assured the least possible amount of trouble with your lines if they are equipped with Kellogg apparatus.

Write for descriptive booklets and prices.

**Canada West Electric Ltd.**  
REGINA SASK.



Six-year-old Blushed Calville, Apple Tree.  
"Pine Grove Murvey"

We grow and offer for sale all the hardiest fruits:

**Apples,  
Crab Apples,  
Plums, Cherries,  
Gooseberries,  
Currants,  
Raspberries,  
Strawberries,  
Rhubarb, Etc.**

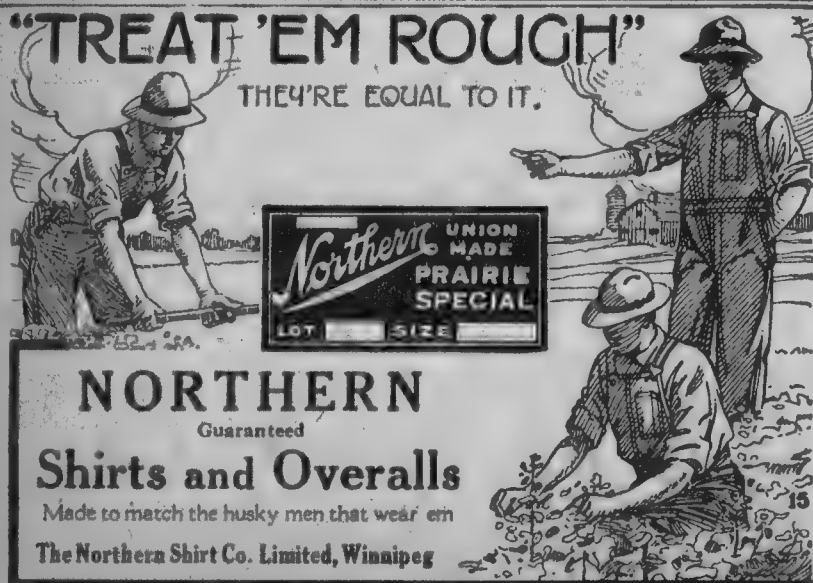
We also carry an assortment of Ornamental Shrubs and Perennial Flowers.

Write for our 1919 Catalogue.

**A. P. Stevenson & Sons, Morden, Man.**

## "TREAT 'EM ROUGH"

THEY'RE EQUAL TO IT.



**NORTHERN**

Guaranteed

**Shirts and Overalls**

Made to match the husky men that wear 'em

The Northern Shirt Co. Limited, Winnipeg

## Paint and Varnish Manufacture

Canadian Factories use Domestic Raw Materials Almost Exclusively

By G. M. Edwards

**T**HE paint and varnish industry, like most Canadian industries, started in a small way about 75 years ago, and from the outset has increased steadily, until it now embraces a large group of factories and warehouses, extending from the Atlantic to the Pacific ocean.

Apart from various small plants in different parts of the country, there are at present ten paint factories and seven varnish factories in Montreal, eight paint factories and 12 varnish factories in Toronto, three paint and varnish factories in Vancouver, B.C., three in Victoria, B.C., three in Winnipeg, Man., and one each in Ottawa, Halifax, Caville, Ontario, and Windsor, Ontario. There are also varnish factories in Brantford, Ontario, Waverly, Ontario, and Bridgeburg, Ontario.

From the above it will be seen that Montreal is the greatest centre for the strictly paint industry, while the greater number of varnish plants are located in Toronto and vicinity. This is no doubt accounted for by the fact that the furniture, automobile and carriage factories, where the greater part of the varnish is used, are located mainly in the province of Ontario.

The amount of capital invested in the paint and varnish business of Canada is approximately from \$12,000,000 to \$15,000,000, and the output of the various plants will run from \$20,000,000 to \$25,000,000 per annum. For an industry of this size, the number of hands employed is not so large as in many other lines of business. This is because modern machinery plays such an important part in the manufacture of paint and varnish. The number of people employed in the manufacturing and merchandising of paint and varnish in Canada is about 4,000 to 5,000.

### Raw Materials Mainly Obtained in Canada

In the early days of the industry the raw materials for the manufacture of paint and varnish were nearly all imported from Europe, but as the home markets increased, the possibilities of getting raw materials in Canada itself were carefully examined, and today our own country supplies by far the largest proportion of what is required for the manufacture of paint and varnish.

The two principal items used in paint making are linseed oil and white lead. Linseed oil is made from the flax seed grown in our north-western provinces, and at the present time the Canadian oil crushers purchase a large proportion of the flax that is produced in this country. This home market tends to stabilize the price of flax seed, and ensures for the grain grower a higher figure for his crop than he would obtain if all the flax seed were exported.

The quality of the linseed oil made in Canada is second to none, and we are almost entirely free from the adulterated linseed oil, which has been a serious menace in some other countries. Linseed oil is the building material in any good house paint; it dries with a tough, hard skin, and combines with white lead and the other pigments to form a durable weather-proof coating.

The crushing of linseed oil has been carried on in Canada for many years. First in Western Ontario, but now there are oil mills all the way from Montreal to Medicine Hat, so that the requirements of the country are easily supplied.

**The Canadian White Lead Industry**  
The next important raw material used in the manufacture of paint is white lead. This is made from the ordinary pig lead of commerce, usually by some corrosive process, and up to about 15 years ago no white lead was corroded in Canada.

The establishment of this industry was first suggested by the British Columbia lead mines, who were producing much more metallic lead than they could find a profitable market for, with the result that they had to ship their supplies all the way from the Pacific coast to London, England. The high cost of freight and the low price that pig lead was selling for in London, made the returns to the miners so

small that some of the mines had to shut down. About this time the price of silver declined considerably, and as the British Columbia lead ores nearly all contain silver, it made it all the more necessary for the miners to dispose of their pig lead at a fair figure.

While this export of Canadian pig lead was being made from the Pacific coast, the Canadian paint makers were importing about 900 tons of white lead per annum on the Atlantic seaboard, all made from foreign pig lead by the factories in England, Belgium and Germany, and the question of using Canadian pig lead for this purpose was naturally an interesting one. The matter was taken up with the Dominion government and the white lead grinders, and after a good many conferences an agreement was arrived at, which would give the white lead industry protection.

The first lead corroding works was erected in Montreal, and this was followed a few years later by a second plant in the same city. Another white lead corroding works is now located in Vancouver, B.C., and from these three factories practically all the white lead used in Canada is now made from Canadian pig lead.

### Other Paint Pigments Obtained in Canada

Besides linseed oil and white lead there are other raw materials used in paint making that are produced in Canada. Oxide of iron is a very important pigment for the manufacture of roof, barn and bridge paints, and particularly in freight car paints. For many years the district near Three Rivers, in the province of Quebec, has furnished large quantities of iron oxide for paint making. The material produced in this section is of great purity, running as high as 95 per cent. iron oxide, and it makes a very durable paint for the purpose above mentioned. Apart from the oxide used in Canada, the mines about Three Rivers export considerable quantities of their product to the United States.

Canadian graphite has been used for paint making to a considerable extent, particularly what has been obtained at Calabogie, and other parts of Ontario.

The chemical dry colors, such as chrome yellows, permanent greens, Prussian blue, vermilion, permanent reds, etc., that are used in paint making, are nearly all produced in Canada by Canadian paint and color makers.

Another very important white pigment used in paint making is zinc oxide or zinc white, and it is made from metallic zinc or zinc ores. Before the war no metallic zinc was made in Canada, but to provide a supply of zinc for munition work and the regular demands of the country, a refining plant for making zinc was built at Trail, B.C., and for some time past has been producing large quantities of metallic zinc. Now that the war is over the demand for metallic zinc will probably grow less, and it is hoped that before long the manufacture of zinc white for the Canadian paint trade will be started in this country.

### Benefit to Canada as a Whole

Any manufacturing industry which helps to develop and provide a market for what is produced in the country itself cannot help being of great benefit to the country, and from what has been said above it will be seen how much the Canadian paint and varnish manufacturers are depending on Canadian raw materials in the making of their goods, and by so doing are helping the general development of their country.

The great increase in the demand for paint and varnish products started about 30 years ago, when goods were put on the market in what is known as the "ready-mixed" form, requiring only to be stirred to be ready for use. This allows the consumer to be his own painter, and ready-mixed goods have become so popular that today a special grade of paint or varnish product is prepared for practically every surface that needs painting or varnishing. Continued on Page 66.

# GREAT DISPERSION SALE

OF REGISTERED

## Percheron and Belgian Stallions, Mares, Colts and Fillies

At our Farm, Half-mile South of Guernsey, Sask., on Tuesday, March 25, 1919

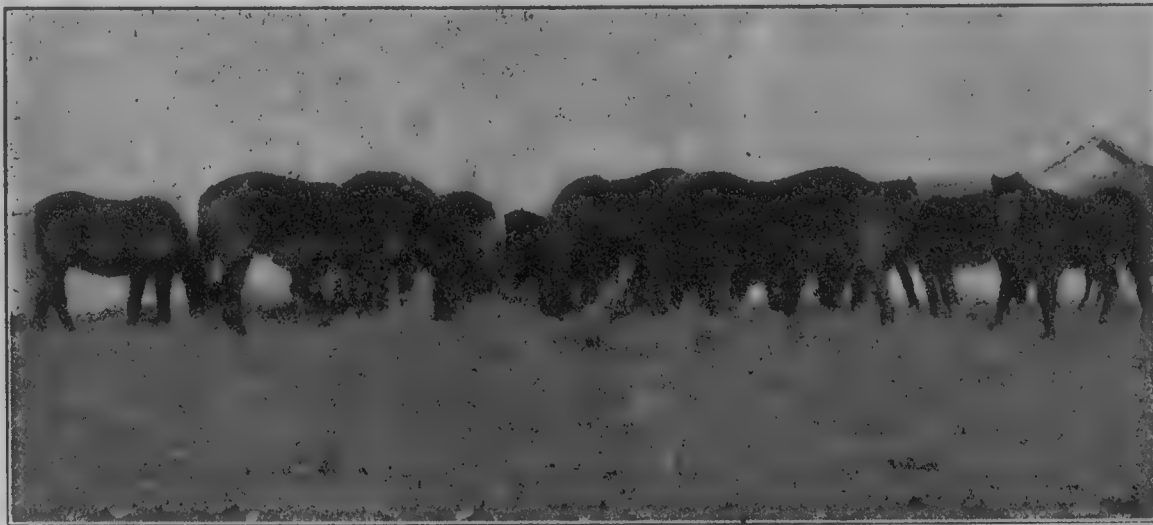
### 22 Head

#### Percherons

Nine Stallions,  
Three to Seven Years.

Eight Mares,  
All Young

Three Yearlings  
and  
Two Sucker Colts.



### 15 Head

#### Belgians

Three Stallions  
Five, Six and Eleven  
Years Old.

Eight Mares  
Three to Eight Years  
Old.

Two Stallion Colts

Two Yearling  
Fillies.

Mares and Colts to be sold in this Sale. These show good, every-day thrifty condition. Photo taken 20 degrees below Zero.

Owing to having sold our farm, we are dispersing our stud of Pure-bred Horses, and prospective purchasers will find them a well-bred lot of really high-class stuff. The majority of the offering is sired by imported stallions. They are in fine, every-day condition, the mares for the most part are in foal, and afford prospective purchasers one of the best opportunities ever offered in Western Canada, to secure high-class stock of both breeds, at their own valuation.

In addition, we are selling 55 Head of Grade Cattle, also the Pure-bred Shorthorn Bull, Roan Lad, 106647, Six Pure-bred Berkshires, some registered, others eligible, and 400 Pure-bred Orpingtons.

The full line of farm machinery includes: Threshing Outfit, 40 H.P. Twin City Engine, Waterloo 40-62 Separator, with Langdon Feeder, all in good shape; John Deere Eight-Furrow Plow; 240-Egg Cypress Incubator, Ford Car 1918 Model; and the usual Farm Machinery, Harness (12 sets), etc.

**TERMS:** Cash up to \$25, and for all Hogs, Poultry, and Feed. Above that amount, the usual arrangements can be made with the vendors. Ford Car, half cash. Five per cent. discount. Strangers must furnish bank references. Hotel accommodation good. Train service convenient. Catalog of pure-bred stock ready now. Send for one.

## MOSIMAN BROS.

## Guernsey, Sask.

Auctioneers: Gar. Johnston, Govan, Sask.; Robert Foley, Lanigan, Sask.; David E. Bunkle, Estlin, Sask.

## Registered Shorthorns

AT AUCTION

There will be sold by  
public auction at the

Guernsey Livery Barn  
GUERNSEY, SASK.

ON

Wednesday,  
26th March, 1919



My whole herd of pure-bred Shorthorn Cattle, comprising Bulls, Cows, Heifers and Calves, headed by Lady's Choice, March 28, 1915; sire, Roan Winner, 92685; dam, Roan Lady, 103439, by which bull the majority of my young stock are sired, and to which my breeding females are in calf. Some of the young bulls are also by this sire, and by the good bull, Spicy Index.

The females are from such well-known families as Mysies, Lavinias, Floras, Roan Duchess, Fisher Roans, etc., and are a lot of good-quality females in useful condition.

This sale takes place the day after Messrs. Mosiman's sale of pure-bred Percheron and Belgian Horses.

Hotel accommodation good. Train service: Winnipeg-Edmonton, West bound, 13.40; East bound, 14.54. Saskatoon-Brandon-Regina, West bound, 19.15; East bound, 9.29.

CATALOGS, giving full particulars and terms ready now.

SEND FOR ONE.

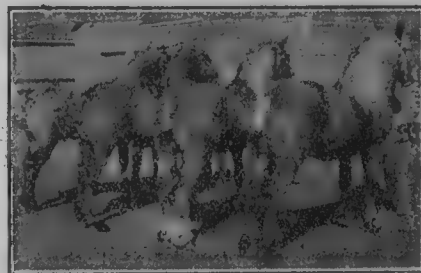
### SIM. GINGRICH

GUERNSEY

SASK.

## PERCHERON AND BELGIAN STALLIONS AND MARES

If you want  
A Good  
Stallion



or a pair of  
Registered  
Mares; write  
us or come to  
our barns at  
Edmonton

We can show you more sound, clean, young Registered Horses, with size and bone, and good breeding than any other firm in Canada.

We can sell you a good Young Stallion or Registered Mares for less money than you can buy as good animals in any other barn.

We can show you some better horses than you could find in any other barn in Canada. We have some stallions, especially selected for use on herds of full-blooded mares. We have been selling, and are selling, more Class "A" Horses than any other firm in Alberta.

We can give you credit if you need it, so you, at least, can partly pay for the animals you buy with the money they make you. We guarantee every stallion a breeder or replace him. All of our stallions are inspected for enrollment before they are offered for sale.

We can sell you a better horse, and still save you money because our buying facilities enables us to pick the best from practically all of the Registered Horses offered for sale in the States. We have an importation arriving on an average of one every ten days. Other Canadian firms make but one importation, so by this time their horses are pretty well picked over.

A three-cent stamp, or a trip to Edmonton may save you several hundred dollars. Write us or see our horses before you buy. Do it now.

We have the Best Commercial Horse Market in Edmonton—stabling for 300 head. If you want to buy or sell Draft Geldings or Mares, write or phone us. Will take horses or cattle at their market value in payment for stallions or registered mares.

## R. F. DYGERT CO. LTD.

STALLION BARN: 10139 97th STREET.  
COMMERCIAL BARN: 10134 103rd AVENUE  
EDMONTON, ALBERTA



# MARATHON TIRES AND TUBES



Experience has taught motorists the necessity of using tires of proven quality.

"Marathon" Tires in three designs have aided motorists to secure immunity from tire trouble. The three types—"Angle" tread, "Bias" tread and "Runner" tread are fulfilling the requirements of the Canadian motorists.

Similar to the tires in both quality and workmanship are "Marathon" tubes—both red and gray being hand-made from the finest material.

**The Marathon Tire & Rubber Co., Ltd.**  
American Plant, Cuyahoga Falls, Ohio  
**ST. CATHARINES, ONTARIO**

WOOD VALLANCE LTD., WINNIPEG, MAN.

## Fires Break Out

and thieves break in. Don't risk the first, or invite the second, by keeping money in the house.



Put it in The Merchants Bank, where it will be safe from loss—always available—and earn interest at highest current rates.

## THE MERCHANTS BANK

Head Office: Montreal, OF CANADA Established 1864.  
With its 25 Branches in Manitoba, 34 Branches in Saskatchewan, 65 Branches in Alberta, 8 Branches in British Columbia, 107 Branches in Ontario, 34 Branches in Quebec, 1 Branch in New Brunswick and 2 Branches in Nova Scotia, serves Rural Canada most effectively.  
WRITE OR CALL AT NEAREST BRANCH

## TO ALL DESIROUS OF TAKING UP LAND

We have the following "snaps" to offer, as part of Estates under our care to dispose of, and all in Manitoba, where values are deemed best and safest today:—

- 1.—An 800-acre farm, on which is C.P.R. station of Lydiate, 25 miles east of Winnipeg. Brokenhead River runs through north-east corner. Large cultivation, fair buildings, and fencing. Excellent value at \$95 per acre. Hard to beat this proposition anywhere.
- 2.—A 640-acre farm, five miles from Otterburne, largely cultivated. 11-roomed house on concrete foundation, fair out-buildings, all fenced and cross fenced, flowing well, cheese factory across the road. A snap at \$25 per acre.
- 3.—A 2,500-acre farm between Brandon and Pseudennis, with large cultivation, good buildings, and frontage on Little Saskatchewan. Ideal place. Only \$80 per acre.
- 4.—25,000 acres on bloc, 40 miles from Winnipeg, close to railway. All stuff at \$20.

We also have our new Spring List in Printer's hands, showing farms, improved and unimproved, in all three western provinces, close to railway, markets, church and school, at specially-attractive prices and on easy terms.

**THE STANDARD TRUSTS COMPANY**  
346 MAIN STREET WINNIPEG

## Gas Engine Lubrication

Systems Employed—Results of Improper Oiling—Essential Properties of Lubricants—By Jno. F. Wright

**T**HE durability and efficiency of the gas engine depend to a great extent upon the proper lubrication of the different moving parts. The importance of proper lubrication cannot be over estimated. Both quantity and quality require careful consideration, and should be correct if satisfactory results are to be obtained, as well as being applied by a positive and reliable means. Excessive wear of the parts, with the resulting troubles, are nearly always the result of defective lubrication.

All bearing surfaces, no matter how smooth they appear to the naked eye, have minute projections over the entire surface, and, when examined under a microscope, the surface of even a highly polished bearing appears rough. Fig. 46 shows how a bearing having an apparently smooth surface appears when viewed through a powerful magnifying glass. If bearing surfaces are run without proper lubrication, the projections will tend to interlock, and a considerable amount of friction will result, consuming a great deal of the power developed by the engine, in overcoming the friction encountered.

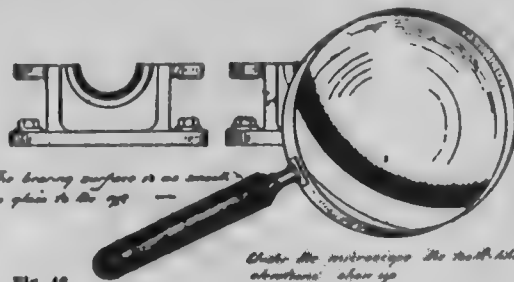


Fig. 46

The purpose of lubrication is to reduce the force of friction to a minimum. Friction can never be entirely eliminated in any mechanism; however, by using a lubricant adapted to the conditions of each particular part, properly applied, it is possible to reduce it to such an extent as to be barely appreciable.

Lubrication reduces friction by preventing the bearing surfaces from coming into actual metallic contact with each other. This is accomplished by the lubricating medium forming an interposing film between the surfaces. The value of a lubricant depends on its ability to hold the bearing surfaces apart, when the bearing is working under the maximum pressure to which it is subjected, and under changes of temperature in the bearing surfaces and the lubricant itself.

### Adapting the Lubricant

No one lubricant is adapted to all bearings. Different sizes of bearings and bearing pressures require lubricants of different formation, and consequently an oil that would be suitable for one engine would not answer for another; heavy-bodied oils being used for heavy bearing pressures, and light, thin oil for small high-speed bearings.

The proper oil to use for a particular purpose is frequently designated by a number of specifications, to which it is required to conform. However, this is of little value to the average operator, since he is not familiar with the terms used, nor has the means necessary to ascertain that the oil meets the requirements of the specifications.

It is possible to determine the value of a lubricant for a particular bearing by experiment and noting the results, at the same time careful attention being paid to its adaptability to the lubricating devices used.

As a rule, it is advisable to use the oil recommended by the manufacturer.

\*Courtesy Imperial Oil Company.

of the engine. He wants his engine to produce satisfactory results, and realizes the importance of proper lubrication.

An oil, to be suitable for a gas engine, must have certain characteristics. (1) It must have body enough to support the bearing parts under the highest pressure which they are called upon to withstand. (2) It should be capable of forming a uniform film of oil over the entire bearing surfaces. (3) It must be able to withstand the heat to which the parts it is intended to lubricate are subjected to without burning, or thinning down too much to maintain a seal between the surfaces, particularly the extreme heat within the cylinder, where the pressure resulting from the expanding gases has a tendency to force out the oil. (4) It should not form heavy deposits of oil in the cylinder, resulting in a tarry formation.

The most important bearings of a gas engine, and the most difficult to lubricate, are those of the cylinder and piston, since they are subjected to intense heat; an oil to lubricate these bearings properly must have a high flash point, yet, because an oil is of high flash test, it does not necessarily prove that that particular oil is suitable for all gas engines. An engine of large bore, operating at low speed, will require an oil of heavy body, while an engine of small bore and high speed will invariably require a lighter oil, yet they both require an oil possessing heat-resisting qualities.

The compression contained in a gas engine cylinder depends to a certain extent upon the body of the cylinder oil. Many engines that leak compression past the cylinder rings can be improved, and will work satisfactorily with a heavy oil, that adheres closely to the surfaces. An engine will often lose compression when an oil of inferior quality is used.

### Use Best Quality

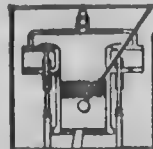
It is of the utmost importance that the cylinder lubricating oil be of the best quality obtainable, and adapted to the engine in which it is used. It is poor economy to use an unsuitable oil just because it is cheap, the resulting wear and depreciation will be many times greater than the difference in cost between an unsuitable oil and one that costs more, but possesses the necessary properties to give satisfactory results.

However, because a certain grade of oil costs more than another, it does not necessarily indicate that it is a more suitable oil to use and will produce satisfactory results. In fact, the reverse might be true. The adaptability of an oil for any purpose cannot be judged by the cost. An oil should be obtained that fulfills the requirements of the purpose for which it is intended, regardless of a consideration of price. It is advisable, when an oil has been found to prove satisfactory, to use that particular grade thereafter, as it can be relied upon and will not necessitate a close observation of the bearing parts.

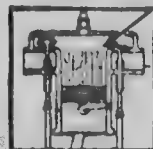
A number of serious considerations may result from the use of an unsuitable grade of oil in the gas engine. The accompanying cuts show some of the conditions frequently met



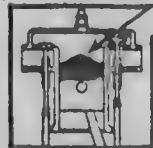
When the wrong oil is used the connecting-rod bearings wear away.



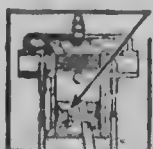
Worn wrist-pin result from bad lubrication.



Cylinder walls are scored when lubrication is poor.



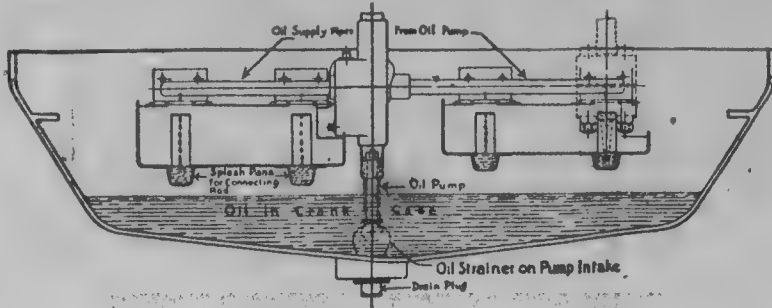
Carbon deposits are formed when the oil works past the piston rings.



Too light an oil causes leakage of gases.

with. If an oil cannot withstand the heat resulting from the combustion of the gases within the cylinder, an insufficient oil film will be formed between the piston and cylinder, and the piston rings will rub directly against the cylinder walls, the cylinder walls become scratched and scored, and in time the rings break. If an oil too light in body is used, it will work past the piston rings and into the combustion chamber, depositing a more or less thick coat of carbon

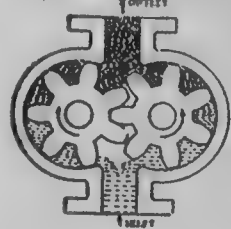
may fail totally in a kerosene-burning engine. The proper lubrication of an engine using kerosene is a much more difficult matter than where gasoline is used principally, because of the very high temperatures to which the oil is subjected, necessary to burn kerosene, and because of the greater tendency of the kerosene to pass the piston rings and destroy the lubricating film of oil between the surfaces. This can be accounted for by the fact that kerosene is not so readily vaporized as gasoline,



\*\*\*Fig. 48.—Combined Splash and Circulating Pump System.

on the piston head and combustion chamber walls. Parts of the carbon become incandescent, causing knocking in the motor, by the glowing carbon igniting the mixture too early on the compression stroke, thus exerting force in the opposite direction to the rotation of the motor.

Ignition trouble is almost certain to result where carbon is formed in the combustion chamber, since both carbon and carbonized oil are conductors of electricity. Short circuits in the spark plugs are a frequent source of trouble, attributable to this cause. This trouble may also be encountered in using a considerable amount of graphite in the cylinder lubricating oil, as graphite is also



\*\*\*Fig. 49.—Rotary Oil Pump.

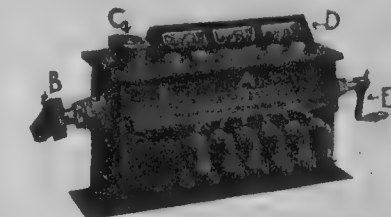
a conductor of electricity, and will interfere with the ignition unless used in moderation.

An oil that is too light allows the compressed gases to escape past the piston rings on the compression and power strokes, resulting in a loss of power. While it is possible to use an oil too light in body, it is also possible to have the other extreme in using a heavy oil in a motor requiring a light or medium oil.

If an oil too light in body is used it will form an insufficient film between the piston rings and cylinder, while too heavy an oil will fail to spread freely and evenly, forming little or no oil film. In a motor where the splash system of lubrication is employed, unless the oil meets the requirements of the cylinders, the bearings are bound to be affected, especially the connecting-rod bearings. This is particularly true if the cylinder oil allows the fuel to get past the piston rings and enter the crank case, mixing with the oil, reducing its lubricating abilities. The bearing surfaces of the cylinder and piston rings, as well as the crank shaft and connecting-rod bearing suffer under these circumstances, the condition becoming rapidly worse.

An oil that will lubricate perfectly the cylinder of an engine using gasoline,

and does not remain in that form through as great a range of lower temperatures as does gasoline, so that a portion of the mixture entering the cylinder may be unvaporized, or it may be condensed and return to its original liquid form. Where a crank case lubricating system is used, the body of the oil may be destroyed by the liquid fuel, or vapors, passing the piston rings, and later condensing into a liquid. If the oil is thinned down by the admixture of kerosene the possibility of a further amount passing the rings will be in-



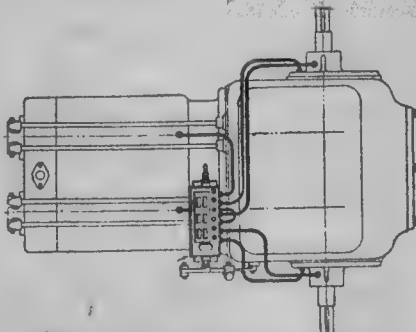
\*\*\*\*Fig. 50.—Force-feed Lubricator.

creased in proportion to the amount contained in the crank case oil.

A good grade of kerosene engine oil should be used when burning kerosene. Oils for this purpose are specially prepared for the conditions which obtain in the engine when using kerosene.

It is always well to follow the instructions of the engine maker with regard to draining the crank case, and refilling with new oil at definite periods, when kerosene is used.

The quantity of oil used in a gas engine cylinder is of importance, as well as the quality. The proper amount required cannot be specifically stated; much depends on the bore and speed of the motor, and the kind of fuel that is used. If too much oil is used, it will cause the piston rings to

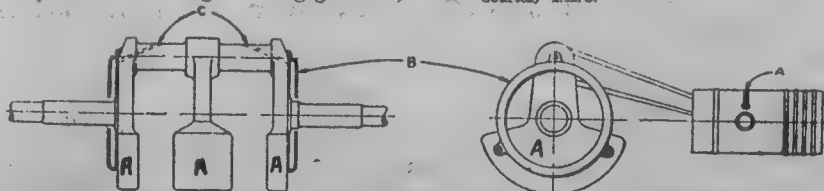


\*\*\*\*Fig. 51.—Diagram showing installation of Mechanical Lubricator and Distributing Tubes.

gum up and stick in their grooves, resulting in a loss of compression. An excess of oil will promote carbon deposits, which will short circuit the ignitor or spark plugs, and will form a thick deposit in the combustion chamber that will cause pre-ignition, and render proper cooling of the motor a difficult matter. Sufficient oil should be allowed to insure proper lubrication; however, it should not be carried much in excess of that point,

Continued on page 57

\*\*\*Courtesy of Emerson Brantingham.  
\*\*\*Dyke's Gas Engine and Automobile.  
\*\*\*Courtesy I.E.C.



\*\*\*\*Fig. 52.—Showing How Mechanical Balance is Secured by Adding Weights. (A).

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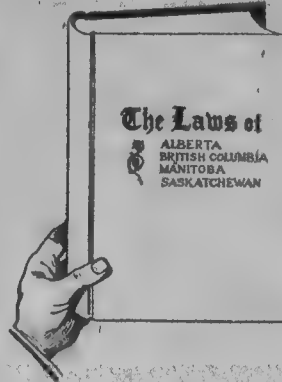
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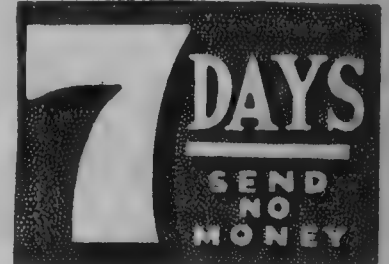
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## The Grain Growers' Guide

WINNIPEG, MAN.

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Gentlemen: I have read the above advertisement. I am a subscriber to The Guide and would like you to send me on approval the Western Canada Law 1919 Edition, with the distinct understanding that I have seven days after its receipt to either return the book to you (in an unsoiled condition) or send you its price, viz., \$3.50.

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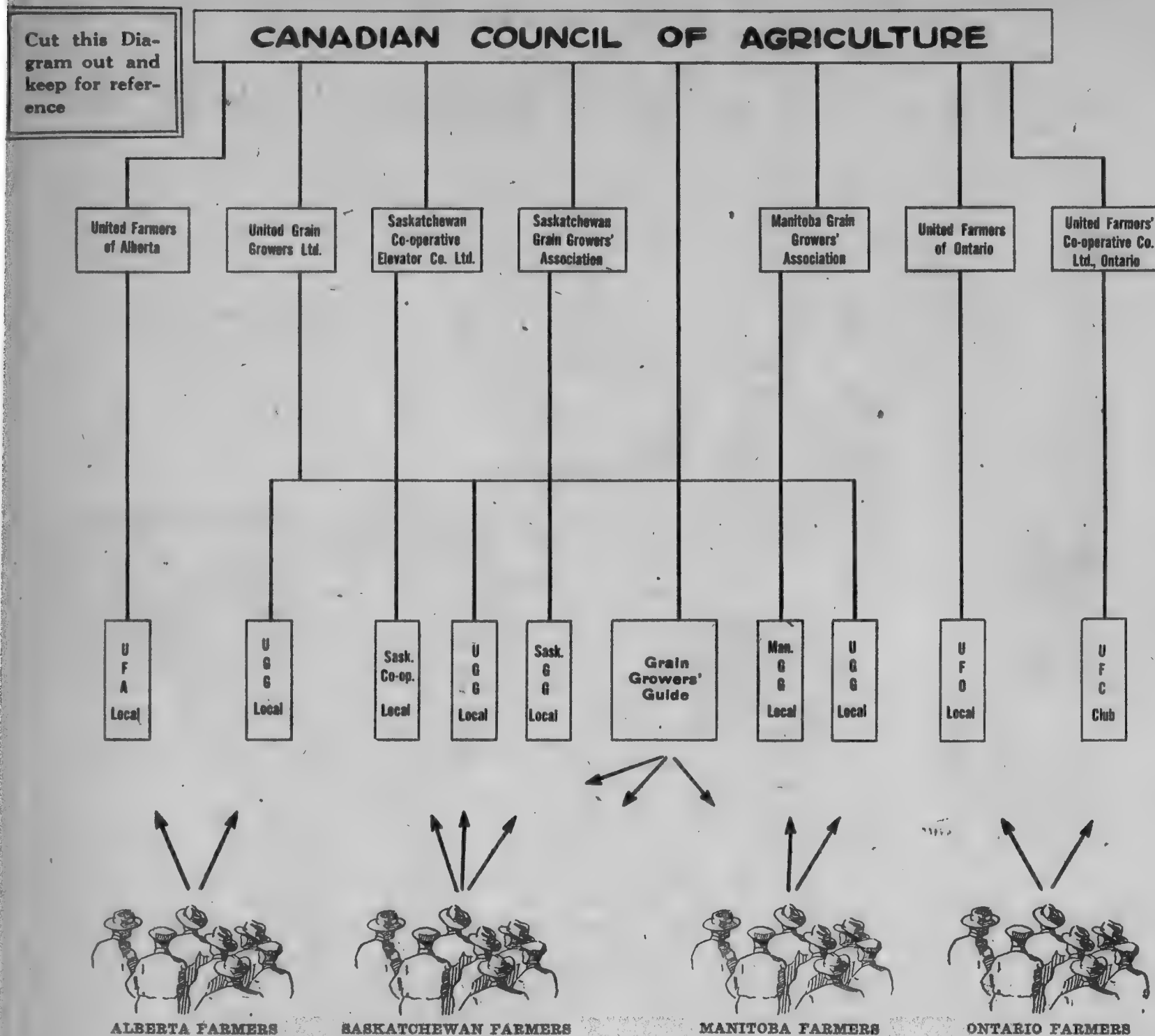
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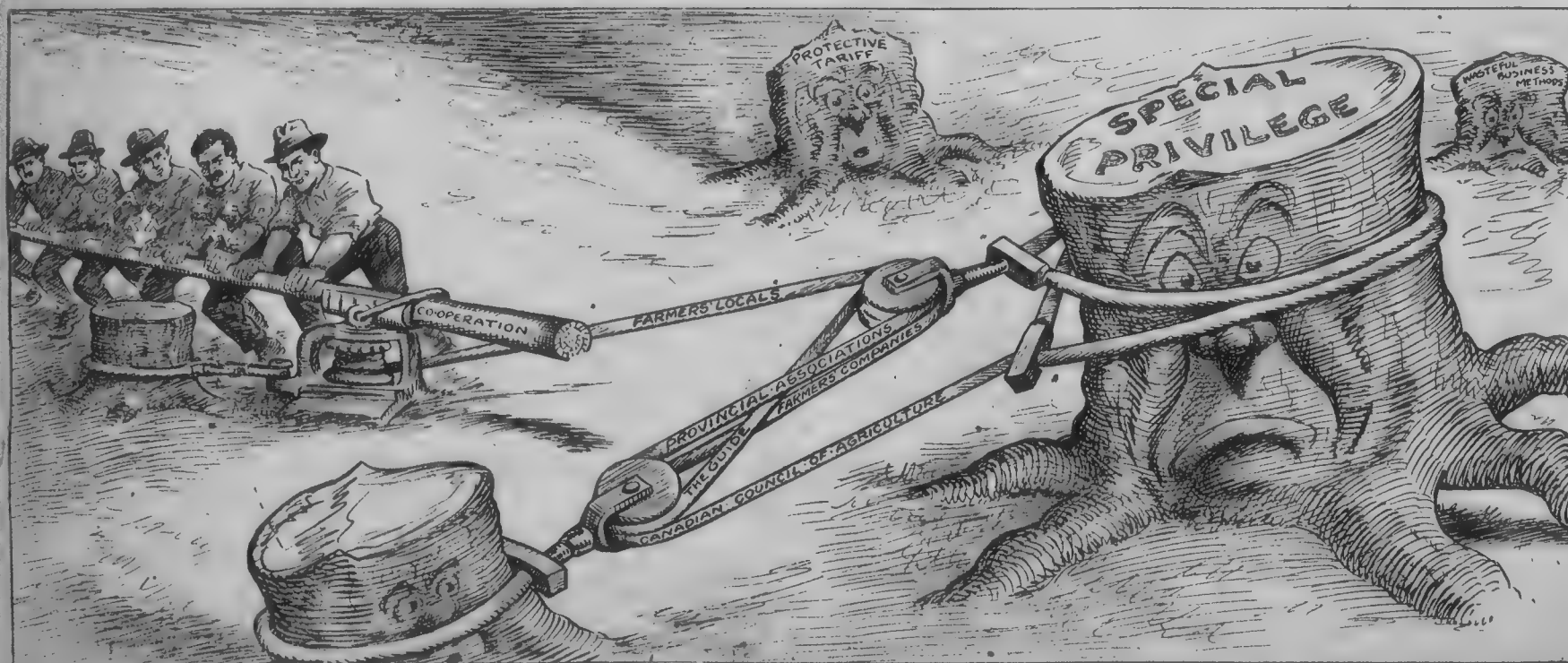
No. 11.



Last week an announcement was made of the articles to appear on this page each week—the centre page of the Guide. This diagram will serve as introduction. Article No. 1 will appear next week.



The diagram above is easier to read than an article, and it shows the present organization of Canadian Farmers, and how their different bodies form one whole. The same farmers in each province are members of both Association Local and the Local of Company Shareholders. The Association Locals are formed into the Provincial Associations. The Locals of the Companies' Shareholders elect the delegates that form the governing body of the Companies. Each Provincial Association and each Farmers' Company, as well as The Grain Growers' Guide, sends representatives to the Canadian Council of Agriculture. The Council is thus able, in Dominion matters, to speak for the whole body of United and Organized Farmers.



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**Make Your Cows Bring  
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**The Grass in the Meadows will soon  
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There is good money to be made in dairying. Cows are profitable if you handle them properly. They need good pasture, plenty of clean water, and a clean and sanitary barn to live in. Then they will bring you home a pay cheque every day in the year. It's up to you to cash it in at its face value. You cannot do it without a good cream separator. If you are separating by the water dilution method you are losing 34 pounds of butter fat every year from each cow you own. If you are using the shallow pan method you are losing 30 pounds of butter fat per year from each cow. If you are using the deep settling system your loss is 23 pounds per cow per year. The loss of butter fat from a good cream separator is only three pounds per year from each cow and that is argument enough to convince you that you should have a Sanitary King Cream Separator on your farm or in your dairy right now. Figure it out for yourself—you know what butter fat is worth.

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It will give you a lot of valuable information about U.G.G. King Separators, and what they will cost you f.o.b. our different shipping points. Besides the Catalog we have other special information concerning Profits in Dairying that we want to send you, and will, if you fill out the Coupon and mail it to a U.G.G. address nearest your location.

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Then decide whether you want to keep it or not. If you are not satisfied with it from every standpoint—if it doesn't prove the easiest-running, closest-skimming and most sanitary and easy-to-keep-clean machine you ever saw, regardless of price or make—you may return it. Furthermore, any money you may have paid us will be promptly refunded, together with any cash paid out in freight charges. That is our proposition to every farmer of dairyman in Canada. A proposition backed by the combined strength of more than 36,000 farmer members of the United Grain Growers Limited. Please understand that you do not have to be a member of this Company to do business with it. The U.G.G. service is open to every farmer. Farmers by the tens of thousands who are not members are dealing with this Company and know that they are profiting by so doing.

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## KING

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It is the equal in every way of the highest-priced machines on the market. It is built on honor, of best possible materials, and so mechanically and scientifically designed that it separates the cream right down to the last drop.

It cleanses and aerates both the skim-milk and cream, removing all dirt or other foreign matter, thus producing a better and more wholesome quality of butter fat, and a healthier and more fattening quality of skim-milk to feed the stock.

The Bowl is Non-Clogging, and will skim the largest milking without choking up.

You can skim a cream of any density, from the lightest to the heaviest, all regulated by a single screw in the bowl-head. This is a patented regulator that permits of a wider range of cream quality than is possible in most other separators.

Self Oiling.—All King Separators are now provided with the new "Bath-in-Oil" Splash system of lubrication. Only a single oil cup to fill and look after.

Easy to Clean and Thoroughly Sanitary.—The construction of the bowl is such that every part that comes in contact with the milk or cream is easily separated and taken apart for thorough cleansing. There are no sharp angles, cracks or crevices for germs or filth to lodge or cause unsanitary conditions that serve to taint the cream and make it undesirable for churning.

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**Pick out  
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We have in our barns here, over 80 head of big, drafty Percheron, Clydesdale and Belgian Stallions, from yearlings up, and most of these are ton horses in condition.

We never had as many big, sound "A" grade horses, nor so many prize winners as we have now, and every horse carries our guarantee.

In Percherons, we have many State Winners—and a wonderful lot of big, drafty colts, rising

three and four, with as good bone and pasterns and as clean hocks as any Clydesdale man would want.

In Belgians, we have horses up to 2,300 pounds that have quality as well as size.

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Reasonable time on stallions to responsible parties, but a cash payment will pay a wonderful dividend.

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This scraper fits any and all Disk Plows and is guaranteed to clean in any kind of soil, under any and all conditions, without friction. The scraper blade is reversible, consequently always sharp.

What this means to farmers is: less horse power; better tilled land; stubble grass and weeds turned under; longer life of machinery; no lost time, and entire satisfaction.

This is the only spring scraper made in Canada and is sold on its merits.

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A number of one and two-year-old Bulls and Heifers. Come and look them over. Prices reasonable.

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## SUNNYBROOK FARM, Stony Plain, Alta.

Special offering of Berkshires—20 head of Boars and Sows, four to five months old, sired by Ames Rival, 148 imp. These are of the most approved long bacon type, and very smooth. Other pigs all ages. Also a few good Tamworths four to five months old. Am booking orders for Spring pigs, straight American bred, American and Canadian, also American and English crosses. Year old Holstein Bulls from cows giving 70 to 80 pounds milk at the present time. Buy the Best—Write for Prices.

WILLIAM GILBERT

Proprietor

# Profitable Steer Feeding

Geo. Quinn, of MacGregor, Man., Cleared \$3,700 on his Winter's Chores—  
Record of Costs and Methods—By E. A. Lloyd.

"It required a little nerve," admitted Mr. Quinn, "to buy these four carloads of steers on the Winnipeg market, on October 12 last. The market was glutted with poorly-finished cattle, and I was the first man to buy in three days."

"What prompted you to buy?" I asked. "Well, I had faith in the cattle business. By careful buying I have always made money out of feeding cattle. Each year I try to grow lots of feed, and my place at home looked lonesome for more cattle."

"Why did you buy at such a time?" I persisted. "Because cattle were cheap," he quickly answered. "Follow an old man's advice," he added, "eyes sparkling, 'and buy when all the other fellows are selling.'"

Such, in brief, is the philosophy of Geo. W. Quinn, of MacGregor, Manitoba, on cattle buying. But it requires a good deal more than an attitude of mind to complete such a "coup" in feeding as this man did in a country that isn't supposed to be adapted for the business. "I have always figured that good cattle here will make as rapid gains on coarse Western grains as on American corn."

Mr. Quinn did a lot more figuring than that, however, which I soon found out as I fired question after question at him as to detailed costs. As a rule he did not even need to refer to his notebook, but carried the record in his head and was proud of it—the record. It was a case of figuring all through, and seldom are such records so complete as his. Mr. Quinn has his business at his fingers' end and can tell you pretty quickly what revenue any of his farming operations pay. But he loves the cattle side of it best, and if allowed to talk on always comes back to steers.

## The Record

"I took my time in selecting the 79 steers in the Union Yards, Winnipeg, for there were lots to choose from. They cost me an average of 10½ cents per pound, and were Hereford and Shorthorn grades. The steers were two-year-olds and averaged about 970 pounds apiece, in fair condition for feeding. They were as uniform as I could find, and did not vary more than 60 pounds in weight. I took advantage of the government assistance in freight and so it only cost me 13 cents instead of 16.1-12 per cwt. to get them home. Laid down in MacGregor, the steers cost me \$102.47 apiece, or \$8,095.13 for the lot."

"Do you know just what these steers cost you to feed them?" I asked. "Yes, I do exactly," shot back Mr. Quinn. "Each steer cost me as follows:—  
20 bushels of barley at 70 cents.....\$14.00  
100 oat sheaves apiece, at 5c.....5.00  
1½ man's labor at \$25 per month (3 months).....2.50  
Interest on \$102.47, at 8 per cent. for 4 months.....2.73

\$24.23

"This brings the total cost per steer up to \$126.70." "What do you get for them," I queried. I almost regretted the question after he handed me the cheque to stare at. Between gasps I made out a cheque for \$13,467.25 for

four carloads of steers weighing 88,450 pounds at \$15.50 a cwt. With a shaking hand I quickly handed back the cheque and asked him how much he made on the whole transaction, deducting freight and commission, and he said \$3,705.10 or \$46.90 per steer.

"Are all expenses accounted for?" I was not satisfied. "No, they ate three stacks of rye straw with a little timothy in it, and cost me 20 cents per steer to inoculate for blackleg. But the liberal hours of labor that I charged to the steers will cover that, and in addition I believe that this bunch of steers added \$2,000 in value, in manure, to my 1,400-acre farm."

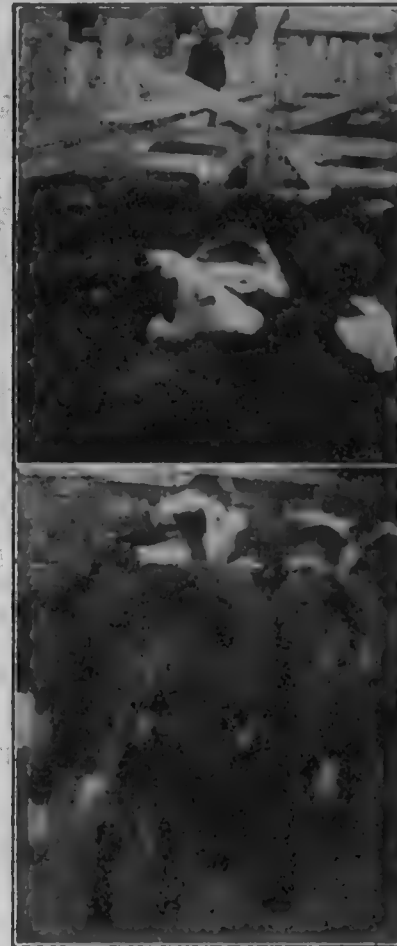
## Feeding and Management

When the steers came out from market they were just put on timothy after a math. Mr. Quinn believes in grasses in crop rotations. The stubble fields and summer-fallows were also used for six weeks to start the cattle nicely on the feeding period. On December 1, one oat sheaf per day (cut just when top oats were ripe) was given each steer. This amount was gradually increased until in three weeks they were getting two sheaves per day. The cattle were left out in a 160-

acre pasture field and fed oat sheaves on the ground. Simple, strong feed tables were built in the pasture in which were fed three pounds of oats and barley chop in equal proportions. This mean ration was gradually increased to 15 pounds a day. Watching the animals carefully Mr. Quinn was able to procure assimilation in his animals of 18 pounds of meal and two pounds of bran per day for the last three weeks. "I probably could have introduced the bran to advantage a little sooner," commented Mr. Quinn. "The steers never went off their feed, and suffered no illness whatever except slight bloating." This is where Mr. Quinn profited by his experience, care and knowledge of cattle. The total gain amounted to about one-and-a-half pounds per day over the whole period.

## Open Sheds and Tank Heaters

The cattle received no pampering, spending the most of their time feeding in the open, and not often remaining in the shelter of the cheap open sheds provided. "I should like to speak a word for tank heaters," said Mr. Quinn. "If the chill is taken off the water in this country the cattle drink more and oftener and make greater gains. I have proven this to my own satisfaction. I prefer not to house cattle too closely and warmly on account of the tendency to steam which freezes and chills them as they are turned out in zero weather to drink very cold water. They are then chilled inside and out, and often refuse to drink. If a farmer has inside water arrangements all very well, but that is too expensive for me. By burning soft coal, or hard by preference, in my tank heaters, with very large water troughs, measuring 16x4x2 feet in dimensions, my cattle never refuse to drink. I leave small openings in the troughs for the cattle to drink out of during the day, which are closed at night. I only burned two tons of soft coal all winter to keep the water in



Notice the Uniformity and Fleshing in the Carlot of Whitesides in the Lower Picture.

two large tanks at a comfortable temperature, so the cost is almost negligible.

"The cattle were watered from wells of different kinds. The water was pumped by hand from the shallow and by windmill provided with an automatic regulator in the deep drilled well.

#### Breeds and Horns

"My cattle were mostly Shorthorn and Hereford grades, and made about equal gains in the feed lots," ventured Mr. Quinn. "All were tractable except three Herefords and two Shorthorns; these were a little nervous. I am satisfied that the Herefords made a little better gains although they may have been bred a little better. I received 15½ cents for all of them. Horns, should, in every case be removed before cattle are put into feed, especially where the feeder is aiming at prime beef. If cattle are bused 48 or even 72 hours before sold, they are thrown into a lower grade.

"It is hard to describe just the kind of steer I like," stated the feeder. "I want a steer with good constitution, with both length and depth to him, showing good digestive capacity. A straight, broad, level back allows a good loin, the critical region in the carcass, to the buyer who judges by the back. I always avoid fine-boned, narrow-gauged cattle. I judge the feeder a good deal by the head and like to see good breeding there."

#### The Steers in the Market

Mr. Quinn's explanation of his feeding success was convincing, but to see the steers in the stock yards completed the story. The four carloads selling at 15½ cents, without a cut, constituted a record for Winnipeg and was well deserved. While not finished, they were choice butcher cattle, uniform in size and quality, with good breed characteristics in the whitefaces and reds and roans. One could not help feeling that there was more than the money-making object in this. Mr. Quinn loved his work.

### In Livestock Circles

#### High-Class Clydesdales at Hillcrest Stock Farm

One of the best collections of high-class Clydesdales to be found anywhere in the Dominion, is to be seen at the Hillcrest Stock Farm, Condie, Saskatchewan. These Clydesdales are owned by Russell H. Taber, who, besides the stud at Condie, also has another good aggregation near Crossfield, Alberta. The Hillcrest Clydesdales were for many years prior to the start of the war, familiar with the larger show rings of Western Canada, and also the Chicago International, and more than held their own wherever exhibited. At the head of this stud is the well-known show and breeding stallion, The Bruce, by Revelant, and his progeny from one of the best aggregations of females ever owned by one man in Canada, have held their own both in show ring, and sale ring all over Canada and the United States.

The Guide fieldman had a look over some of the younger stuff at Hillcrest the other day, and out of quite a number of good ones he picked Commander of Hillcrest, by The Bruce, and whose dam is Shapeley Meg, by Prince Shapeley, by Everlasting.

This beautifully-fashioned yearling possesses great style and a good stretch of frame, carried on the best of feet and legs. The three-year-old Marquis, of Hillcrest, also by The Bruce, out of Rosette, by Royal Favourite, is an exceedingly strong colt, with well-coupled body, good wide hocks and splendid feet.

Another three-year-old, Prince of Hillcrest, out of Princess Alice, by Montrose Mac, is one of the best of the many good colts sired by The Bruce. This horse stands 17 hands high, he possesses unusual degree of substance and development, has a strong, level croup, good quarters, with all that can be desired in feet and legs.

The Earl of Hillcrest, out of Sturdy Princess, is a splendidly moving youngster, with promise of good development.

A couple of good foals out of Royal Favourite mares, and a nice lot of fillies complete the aggregation of young stock presently at Hillcrest, and these, Mr. Taber is offering for sale at the present time. Some of the older colts he will hire out under the Federal Aid Scheme of Assistance to Horse Breeders. Those looking for some good young Clydesdales, with the best of quality, can find what will suit them at either of Mr. Taber's places, Hillcrest, Condie, or Crossfield, Alta.

#### The Alberta Offering to the Brandon Sale

Senator P. Talbot and Son, are contributing six head—four females and two bulls. Of the females, Siren 2nd, of the English Lady tribe, is a nice smooth heifer of good character, and is well gone in-calf to the Wimple bull Spicy Model. Coulee Rose 12th is another good quality heifer of the same family. She was sired by Loyalty, 84865, a richly-bred Roan Lady; her dam was by Buckingham Chancellor, of the Cruickshank Buckingham tribe. Coulee Pearl 8th, is a beautiful thick, tidy heifer, sired by Loyalty, 84865, and her dam is by Diamond's Pride, 54712, a well-bred Diamond. The bulls, Lovely Prince and Spicy Model 2nd, are both English Lady's by

# Interprovincial Shorthorn Show and Sale

Over 140 Head

OF

CHOICE

SHORTHORNS

YOUNG BULLS

AND HEIFERS



The animals entered in this Sale represent the

**Best Herds**

of Manitoba, Saskatchewan and Alberta

To be held at **BRANDON, MAN.**

**Thursday and Friday, April 3 and 4, 1919**

THE purpose of this, the first sale of its kind in Western Canada, is to draw the Shorthorn interests into a closer and better relationship, and the animals to be sold represent the most approved type; they are of the best of Scotch tribes, or strong in Scotch blood, and from a pedigree or individual standpoint, they comprise an aggregation whose selling will occasion wide interest. For cattle that are right to add to good herds or for foundation stock, this sale offers an unrivalled opportunity.

#### CONSIGNORS:

##### Alberta

P. Talbot & Son, Lacombe.  
J. L. Walters, Clive.  
H. S. Currie, Castor.  
W. W. Sharpe, Stettler.  
S. G. Carlyle, Edmonton.  
J. G. Clark, Clark Manor.  
Hon. Duncan Marshall, Olds.

##### Saskatchewan

The Wright Farms, Drinkwater.  
The Estate of late G. W. Brown, Lajord.  
H. Follett, Duval.  
The Out Arm Stock Farm, Bangor.

##### Manitoba

John Graham, M.P.P., Carberry.  
J. G. Barron, Carberry.  
McMillan Bros., Poplar Point.  
J. B. Davidson, Myrtle.  
Foley Bros., Manitou.

##### Manitoba—continued

The Van Horne Farms, Selkirk.  
Miller Bros., Myrtle.  
W. O. White, Morden.  
Jas. Duthie, Hartney.  
W. C. Honey, Binscarth.  
Wm. Grayson, Newdale.  
John Crawford, Chater.  
W. J. McFadden, Glenboro.  
W. E. McConnell, Hamiota.  
Geo. Allison, Burnbank.  
Chas. E. Irwin, Neepawa.  
J. G. Washington & Son, Ninga.  
A. W. Murray, Lyleton.  
Andrew Graham, Pomeroy.  
David Allison, Roland.  
Jas. J. Miller, Myrtle.  
Thos. L. Skinner.  
Mr. Sommerville.  
Samuel White.  
Samuel Fletcher, and others.

The cattle will be judged by Prof. Geo. E. Day, Guelph, Ont., Secretary of the Dominion Shorthorn Breeders' Association, on April 3, and they will be disposed of in the order the prizes have been awarded.

Banquet and addresses from leading Shorthorn breeders in the evening.

You are cordially invited to attend this Sale.

Catalogs are ready, and requests for same should be sent to A. E. MEYER, Legislative Buildings, Edmonton, Alberta.

#### COME AND BRING YOUR FRIENDS

Auctioneers—H. O. Tellier, Farmington, Minn.; Scotty Milne, Kakoka, U.S.A.

Sale Committee—A. E. Meyer, Edmonton, Alta.; H. Follett, Duval, Sask.; J. B. Davidson, Myrtle, Man.

## High-Class Shorthorns

I will offer at the Interprovincial Shorthorn Sale, at Brandon, on April 3 and 4, Two Heifers and a Bull, the get of my herd bull, Fancy Lord. These animals are an outstanding trio; they have size, quality and symmetry, and will certainly satisfy high-class enquiry. Anyone wishing the best of blood and breeding should look these animals up at this sale.

**GEORGE ALLISON**

BURNBANK

MANITOBA

## Acme Percherons

Stud headed by the Champion Keota Jalap. Choice stallions coming two and three years old, with substance and quality combined. Fully guaranteed. All are government-inspected and registered in Class A. Prices: \$600 to \$1,000.

**E. A. DAVENPORT**

ACME, ALTA.



## Myrtle Beau, 118,504

Sire, Shenley Sunbeam; dam, Myrtle Belle; Gr. Sire, Metropolitan, Imp.; Gr. Dam, Myrtle. Calved, October 29, 1917.



I will offer for sale at the Interprovincial Shorthorn Show and Sale, at Brandon, on April 3-4 the above Bull. He was calved on October 29, 1917, and is a big, stylish youngster, weighing around 1,200 pounds. He is most pleasing in form, smooth, and every inch a bull. His dam and grand-dam are two of the best cows I ever owned, and the above calf is one of the best I ever bred. He will make a great herd header and should fulfill every requirement as a sire. See him at the Sale.

**J. B. DAVIDSON, Willow Lodge Farm, MYRTLE, Man.**

## CLYDESDALES and SHORTHORNS

**CLYDESDALES**—14 Stallions, ranging in age from three to 13 years old, for sale, by such sires as Bonnie Buchlyvie, Marcellus, Royal Guest, Baron's Pride, Model Buchlyvie, and others of equally high-class pedigree. I have also Five Yearling Stallions and Five Fillies, of the most fashionable breeding. Anyone looking for a good stock or show horse should see my Clydesdales. I will also sell Two Hackney Stallions and Two Hackney Mares.



**SHORTHORNS**—Nine Bulls from six to eighteen months old, and Females of all ages for sale. In the lot is a beautiful Brawith Bud, imported-in-dam bull calf, ten months old, and roan in color. Those of my own breeding generally carry about three top crosses of imported bulls and are of the low down fashionable-bred Scotch kind.

Write me for Particulars or come and see the Stock.

**John Graham** Branch—Three Hills, Alta. **Carberry, Man.**

## Pioneer Stock Farm Champion Belgian Stallion at Stud

I will stand at stud, during the coming season, at the above farm, the Belgian Stallion, Paramount Wolver, Champion son of the \$45,000 Farcent. The first colt of Paramount Wolver, namely Lady Wolver, was first in her class at Brandon and Regina Summer Shows, as well as the Chicago International of 1918. Fee: \$100. Free pasture for mares. I have also for sale, at all times, a few high-class Belgian Stallions and Mares, all ages. Write for particulars.

**GEORGE RUPP**

LAMPMAN

SASKATCHEWAN



Paramount Wolver

## HILLCREST CLYDESDALES

I have for hire, under the Federal Scheme of Assistance to Horse Breeders, three three-year-old Stallions, by The Bruce, all out of imported mares. These stallions have the Clydesdale symmetry and genuine draftiness which bring the best service.

I have also for sale a number of two-year-old and Yearling Stallions by The Bruce, as well as a few by Fyvie Stamp, by Baron Beaulieu. These are a choice collection and a bargain can be secured by coming to see them at once. Ranch near Crossfield, Alta.; Home Barns, Condie, Sask.

WRITE, WIRE or PHONE ME.

**R. H. Taber**

CONDIE SASK.



## J. W. DURNO, Livestock Auctioneer MIDWAY SALES STABLES, CALGARY, ALTA.

Have a wide connection among breeders throughout Western Canada. Specialize in selling pure-bred stock. If you are arranging a sale write me early for dates, as I sell nearly every day in the year. Rates reasonable. Satisfaction assured. Horses for sale privately, or by auction. Sales: MONDAYS AND THURSDAYS.

the Wimpie bull Spicy Model. These are two nice smooth bulls of good quality.

J. L. Walters, of Clive, is sending two heifers about two years old. Janet Bandsman is a roan by Escana Bandsman, 101037, a Missle; her dam was by the Kilbean Beauty bull, Cashier, 46947. This heifer was a winner at Calgary Show and is a real strong show proposition. Lady Ann is a red, by Lord Omega, 83430; a richly-bred Mildred dam by Brawith Hero, 68780, a Brawith Bud. This is a very low-set, deep, thick heifer.

W. W. Sharpe, of Stettler, is sending a bull and a heifer. The bull, Columbia Wonder, will be two years old at sale time and is an exceedingly well-bred Matchless. He was sired by Escana Champion, 95966, a richly-bred Broadhooks, by the great sire Right Sort, Imp., 86057. His dam was by the Mildred bred show bull Mildred's Royal, 45353. Columbia Wonder is a smooth bull with pleasing character. He should go to head a good herd.

J. G. Clark, of Clark Manor, is entering Waterloo Princess 44th, a beautiful red, 11-months' calf of the Shethin Waterloo tribe. She is by Doune Campaigner, Imp., 92115; her dam is by the Butterfly bull Bullrush, Imp., 69738.

E. G. Carlyle, of Edmonton, puts in the well-bred Marr Stamford bull, King of Hearts, 110715. He is a white three-year-old, by the Mildred bull King of Diamonds, 90773; he is by the great Gainsford Marquis, Imp.; dam by Broadhooks, Golden Fame, Imp., 50018.

### A Great Percheron Sire for Alberta

W. L. Carlyle reports the purchase by George Lane, of Calgary, Alberta, of the Percheron stallion, Jankrass, 78505, from Matthews Bros., Larabee, Iowa. Mr. Lane has been scouting for some time for a suitable stallion to use on the half-sisters of the Chicago International Champion, Imprecation, sired by Pinson, the horse that has been breeding with such signal success on his large farm at Namaka, Alberta.

Mr. Carlyle spent some time in France recently endeavoring to locate a stallion suitable for crossing on the Pinson fillies, but was unable to locate on what he considered good enough. At the recent International Show in Chicago, Mr. Lane was so impressed with the excellent type, great substance and rare quality of the two mares, Maud and Nellie, that won second and third in the strong four-year-old class for Charles W. Brown, that he immediately instigated a search for their sire and found him in this imported horse, Jankrass, that had been used for several years on a mixed lot of grade and pure-bred mares, but always producing the same uniformly good type colts as represented in the two good mares shown so successfully in Chicago this year.

Jankrass is nine years old, was imported as a two-year-old by Dunhams, and is a splendid individual with a pedigree of the most approved sort, tracing to some of the best foundation stock of France, through the best individuals of the breed. Sec. Dinsmore, who recently saw Jankrass, and a number of his get, believes him to be one of the best horses of the breed in America, both as an individual and as a sire.

On Mr. Lane's Namaka farm, where he has assembled a large number of the best mares on the American continent, in addition to the much larger band that he keeps on the celebrated Bar U ranch, Jankrass will have an excellent opportunity to still further prove his merit as a great sire.

### Large Importation of Good Percherons

Messrs. Trotter and Trotter, Brandon, Man., one of the oldest and most widely-known firms of importers in Manitoba, have just landed at their stables a first-class consignment of around 30 head of good registered Percheron stallions and mares.

The mares range from yearlings up to eight-year-olds. They are big drafty animals with the best of tops, and Messrs. Trotter state they are finding a splendid enquiry for them. The majority of them are in foal to good sires. The stallions are from two to six years old; two of them weighing around the ton, and these two as breeders and show-yard propositions will be able to give a good account of themselves. They are well coupled, well topped, with the best of fronts, and stand on remarkably good, hard legs and broad flat feet. The Percheron horse is finding considerable favor in Manitoba, as well as in the other western provinces, and Messrs. Trotter's importation compare very favorably alongside other recent western importations, and the horses will, undoubtedly, find a ready sale. Write Messrs. Trotter if you need a good stallion or a team of mares; 14 of the latter have already been sold, and the balance will go quickly.

### Southview Shorthorn Dispersion Sale

One of the largest private Shorthorn sales ever held in the West, will take place at Southview Stock Farm, Prince Albert, on Wednesday and Thursday, March 19

## The Grain Growers' Guide

and 20, when M. R. Cowell, the Shorthorn specialist of the north, will dispose of his entire splendid herd of Shorthorns without reserve. The very high-class bull, Marr's Avon 2nd, by Avondale, heads the herd and will head the sale. He has a splendid lot of calves that prove his prepotency. The females have been carefully selected over a period of years for uniformity, type and breeding value. They all go at the sale to the highest bidder.

In addition to the herd offering the large, well-equipped stock farm will be sold. Mr. Cowell has been compelled to sell this valuable property and well-established herd to enable him to look after interests in the U.S.

### Federal Assistance to Horse Breeders

Those wishing to take advantage of the assistance given by the Department of Agriculture, Horse Division, Ottawa, to horse breeders, in securing draft stallions, are urged to get their applications into C. M. McRae, Chief, Horse Division, before April 1, when the time limit positively expires.

### Cattle from Canada into Ohio

There have recently been brought into effect regulations affecting dairy and breeding cattle (but not cattle for immediate slaughter) imported into the state of Ohio, from Canada, as follows:—

"All dairy and breeding cattle six months of age and over, coming into Ohio from the Dominion of Canada, shall come in under quarantine of 60 days, and shall be re-tested by this department before being released, except cattle which have been tested by a veterinarian in the employ of the Bureau of Animal Industry, Washington, D.C., such test having been made within six weeks prior to the date of shipment.

In the shipment of cattle the owner must first obtain a permit from the Bureau of Livestock Industry, Columbus, Ohio, and enclose an approved health certificate of the animal or animals intended for shipment into Ohio. If this health certificate indicates no reaction or doubtful reaction, they will be permitted to be shipped into Ohio, subject to quarantine and a 60-day test."

### Interprovincial Shorthorn Show

It is certain that no event during the year will interest more Shorthorn men all over Canada, or be more popular, than the forthcoming Interprovincial Shorthorn show and sale, to be held at Brandon, on April 3 and 4 next. This is the first event of its kind to be held in Western Canada, and will serve as a powerful incentive for a closer relationship between Shorthorn men, and a most popular method of bringing buyer and seller together. The consignments, which have been carefully selected by the secretaries of the different Shorthorn associations of Manitoba, Saskatchewan and Alberta, are especially attractive, and will afford to prospective purchasers an unrivalled opportunity to compare values and prices. Some 440 originals have been cataloged; they represent the herds of the most representative breeders of Western Canada, and are a class of cattle which will prove immensely attractive, and should appeal to every man who is in the market for high-class stock for breeding purposes.

A number of the bulls offered are imported; any one of them will make a real herd header, while the females will look good in any herd. They will all be offered in good condition; some of them have not been fitted for show propositions, but they are just right for a good investment, and will undoubtedly improve the standard of the breed wherever they go.

It is the best opportunity ever presented by Shorthorn men to Western breeders to select cattle at their own prices.

The families represented by the cattle to be offered are among the choicest in Shorthorn history, and every animal carries the best of Scotch tribal blood and is an offering of merit.

The cattle will be judged by Professor E. Day, of Guelph, Ontario, the secretary of the Dominion Shorthorn Breeders' Association, on April 3, and they will be sold in the order in which the prizes have been awarded.

A banquet will be held the same evening, and addresses will be given by leading Shorthorn celebrities on the continent, while there will be other attractions. The sale will be held on April 4. Everything points to a good attendance of buyers from all over Canada and the United States. Two auctioneers with a continent-wide reputation will sell. The sale committee comprise: A. E. Meyer, Legislative Buildings, Edmonton, Alberta; H. Follett, Duval, Saskatchewan; and J. B. Davidson, Myrtle, Manitoba, the various secretaries of the provincial clubs.

Catalogs are ready, and may be had on application to A. E. Meyer, at the address above given.



Type of Percheron and Belgian Mares to be Sold at Morlan Bros., Gurnsey, Sask.

## Gas Engine Lubrication

Continued from Page 51

since there is not a great margin between the proper amount of oil required and excessive lubrication.

### Lubricating Systems

To be most efficient, a lubricating system should be adjustable, so that it can be set to deliver a definite quantity of oil in a given time, or the quantity delivered should be governed by the speed of the motor, a combination of both these features is desirable. It should be positive in action and as nearly automatic as possible, delivering a uniform quantity of oil, neither too much or too little. Too little oil will cause overheating of the parts and possibly serious damage, while too much oil will not cause serious trouble, except in the cylinder; it is wasteful and results in a dirty engine by an accumulation of foreign matter, which may indirectly cause trouble, particularly in the ignition apparatus.

Lubricating systems may be divided into three principle classes: Gravity sight-feed, splash system and force-feed system. Fig. 47 represents a common sight-feed lubricator from which the oil is delivered by gravity. This type of oiler is used on many different machines. When used for cylinder lubrication, a special feed is required to prevent the compression from interfering with the oil entering the cylinder. It is used on many stationary and portable engines, both large and small, and to some extent on tractors.

### Splash System

Practically all gas engines, and particularly modern tractor motors, in which the splash system is used, employ a combination of the splash and force-feed systems. This is claimed to be the most efficient type of splash lubrication. In this system the oil is carried in a reservoir in the bottom of the crank case, from where it is pumped by a rotary, or plunger pump, into splash pans, or troughs, directly under the connecting rods. A constant level is maintained in the splash pans by an overflow, which returns the surplus oil to the reservoir. A projection on the connecting rods dip into the oil in the splash pans and splash the oil in a fine mist, or spray, over all the interior mechanism, lubricating the pistons and cylinders, as well as the crank-shaft, connecting-rods and cam-shaft bearings. In this system, the oil is used over and over again until exhausted. A combined splash and force-feed system is outlined at Fig. 48. The oil pump shown is of the plunger type. Fig. 49 represents a rotary-type gear oil pump.

### Force-feed System

The force-feed system of lubrication is applied to the gas engine by two or three different methods; the mechanically-operated force-feed lubricator, however, is employed in the majority of gas engines and tractor motors lubricated by this system. A six-feed, mechanically-operated force-feed lubricator is shown at Fig. 50. The oil is conveyed to the various bearings of the motor by tubes connected to the different feeds at points A. Each feed requires a separate unit to do the pumping and regulate the amount of oil delivered. The amount of oil that is delivered by each tube can be ascertained by observing through sight-feed hood D the quantity discharged by the goose necks inside the hood. The lubricator is operated by means of the lever B, which is attached to some moving part of the engine having an oscillating motion. The amount of oil delivered may be varied by changing the point at which the driving member is attached to lever B. Each individual unit may be varied by the screws which appear in front of the sight-feed hood. The lubricator may be operated independent of the mechanical drive by means of the hand crank E. C is the filler cap. In this system of lubrication the oil is used but once. In some tractors it is caught in the crank case, after being discharged from the bearings to which it is first conveyed, and used again on drive chains or gearing.

Fig. 51 shows the installation of a six-feed mechanical lubricator, and the location of the distributing tubes, on a twin-cylinder engine.

The means by which the connecting-rod bearings are lubricated in a num-

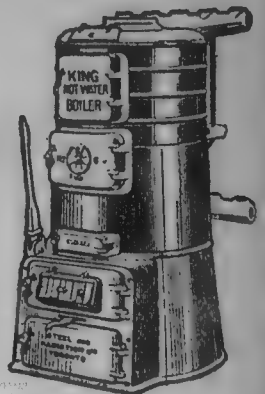
Continued from Page 61



## Be Well Advised----Put Hot Water Heating in your Home

Hot Water Heating is so much simpler, easier, more convenient, and keeps the house warmed up to a desired temperature so continuously and, last, but not least, is so much more economical in fuel that there is no comparison with the old and discarded methods of heating by stoves and hot air furnaces. Be well advised—Put hot water heating in your house. A King Boiler is worth more than its costs and the installation can be put in as early as you choose. A King Boiler in your home would be such an improvement and give so much real comfort and satisfaction that you should write us at once and get full particulars about this universally-adopted method of heating.

The King Hot Water Boiler is made in sizes to suit any house or building on the farm, or in the village or city. The King Boiler has many distinct advantages, all explained in our booklets, which are sent free on request. The King Boiler can be installed in any house; a cellar is not necessary, an unused downstairs room doing as well.



## KING HOT WATER BOILERS AND IMPERIAL RADIATORS

IMPERIAL RADIATORS are made distinctly superior because they are made of best-grade iron and subjected to rigid tests. They are so constructed that every inch of surface is heating surface. They have exceptionally graceful lines and proportions and are ornamental as well as useful.

**DO YOU WANT TO KNOW** what a King Hot Water Heating System would cost? Write us—we will gladly send you booklets, literature and full information. Our Engineering Department is at your service to supply you with information as to your needs. Do not wait—time passes—the season for alterations and installing will be gone before you realize it, so, lest you forget, write us NOW—we will answer you by return mail.



**J. H. Ashdown Hardware Co. Ltd.**  
SASKATOON - WINNIPEG - CALGARY

Messrs.  
**J. H. Ashdown Hardware Co. Ltd.,**  
Saskatoon, Winnipeg, Calgary.

Dear Sirs: Please send me a copy of your Illustrated Booklet, Comfortable Homes, and also, without obligating myself in any way, I would like to know the probable cost of a hot water system, suitable for heating my home.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

## The "Bissell" Double Action Disk

is a two-in-one Implement. This Harrow is both In-throw and Out-throw. By hitching 4, 6 or 8 of the Bissell Disk Harrows together in a group, you can have a double action outfit for Engine power and disking on a large scale. The gangs are flexible on the Bissell Harrow and are not too long to fit the hollows made by heavy Engine Drive Wheels. These same Harrows may be used for double action or single disking with horses.

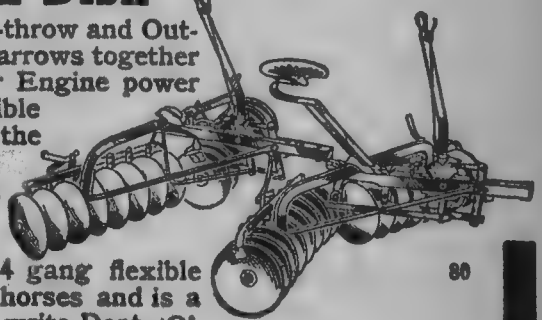
The "Bissell" will make a proper seed bed for you. Another Bissell special is a 28 plate wide sweep, 4 gang flexible Harrow covering 14 ft. It is nicely handled with 6 horses and is a favorite with many farmers. For further particulars write Dept. 'O'

MANUFACTURED EXCLUSIVELY BY

**T. E. BISSELL COMPANY, LTD., ELORA, ONT.**

Write to any of the Jno. Deere Plow Company's Branch Houses

Since the fire we have more than doubled our factory capacity, and will hereafter endeavor to furnish Bissell Disk Harrows to our many customers, far and near, who prefer Bissell Disks to any other style.



### Pleasant Hill Herd of Tamworth Swine

Both Sex of the Great Bacon Breed for Sale, from my Prize-winning Stock.  
**T. G. SCHEER** Bethany, Illinois, U.S.A.

### Gwenmawr Stock Farm

Breeders of Aberdeen-Angus Cattle, Hampshire Sheep and Duroc-Jersey Hogs.—**EDWIN O. HARTE**, Proprietor, Brandon Manitoba.

### Mammoth JACKS To Sell

I have, at Carrington, North Dakota, some large, three to six-year-old Mammoth Jacks to sell. Also two good draft stallions and 25 head of High-class Grade Farm Mares, three to seven years old, 1,400 to 1,700 pounds. Write for Prices and Terms.

**B. W. ELDON**, Carrington, North Dakota, U.S.A.

### HEREFORDS FOR SALE

I have at the present time a choice selection of well-bred Hereford Bulls, as well as a few Females for Sale. The Bulls, which number around 20 head, are all young, the majority of them fit for service, and they are the kind which will improve your herd and make you good money. Many of them are from the well-known Orchard Farm Stock of W. T. McCray, Kentland, Ind. Come and see them, or write me your wants.  
**JOSEPH A. CHAPMAN, ISLAND PARK FARM, HAYFIELD, MAN.**

### Elmhurst Polled Herefords

Largest Polled Hereford Herd in Canada.

Sire at head of herd: Polled Climax, by Polled Echo. Polled Climax sired Marvel's Pride, the \$5,400, ten-months-old calf.

We have for sale a large selection of Young Bulls, all ages; good, smooth, acclimated youngsters, with size and substance. Also some females, all ages. Write us your wants and come and see our cattle.

**JONES BROS.**

**WHITEWATER, MAN.**



## STOCK (Miscellaneous)

**THE ALMEDA STOCK FARM HAVE FOR** sale a number of Shorthorn bulls and females; also well-broke Shetlands, pony harness and carts. Correspondence solicited. R. H. Scott, Alameda, Sask.

**FOR SALE—REGISTERED HEREFORD BULLS**, from eight to 22 months old. Also Single Comb White Leghorn and Light Brahma cockerels; all from good stock. W. H. Harrison, Montmartre, Sask. 6-6

**EVERGREEN FARM—SHORTHORN BULLS**, rising two years. Yorkshire sows, bred for May litters. Write or phone. Thos. Sanderson, Holland, Man. 6-8

## SHEEP

**SHEEP FOR SALE—GOOD GRADE EWES** bred to Shropshire and Oxford rams. Phone, write or call. Simon Downie & Sons, Carstairs, Alta. 58t

**300 YOUNG SHEEP, LAMBS COME MAY** first, \$15 to \$20. Three Shropshire rams Vermilion or Wainwright stations. Phone or write. Jared E. Brown, Cummings, Alta. 7-8

**SELLING—60 RANGE EWES BRED, ALSO 60** ewe lambs. D. Howell, Yorkton, Sask. 9-6

## GOATS

**FOR SALE—TWO ANGORA BILLY GOATS**, year old, \$25 each. Thomas Paulson, Leslie, Sask. 10-2

## HORSES

**FOR SALE—CHAMPION HACKNEY STALLION**, Dominion (imp.), winner of innumerable firsts and championships on the western circuit. This horse is a beautiful specimen of the breed, with smooth lines and lots of clean, flinty bone. His conformation is faultless and his action of the true, straight kind that defeats all competitors. He is sound as a Victory Bond and a sure breeder. Photo sent on application. J. Harrison, Fort Qu'Appelle, Sask.

**FOR SALE—BLACK PERCHERON STALLION**, eight years old; perfectly sound in every respect; weight 2,215 pounds; good worker and sure foal getter. Five years in stud, reason for selling. Would take cattle or sheep. Price and terms right. James A. Meldrum, Magrath, Alta. 11-2

**WANTED BY DARLINGTON DISTRICT**, two club stallions, Clydesdale and Percheron, for 1919 season. None but first-class animals considered. Apply; stating weight, age and color, to J. S. Ticknor, Secy., Darlington, Man. 11-2

**REGISTERED BELGIAN STALLION**, four years old, weight 1,900; will sell or exchange for Percheron stallion or good mares. This is a choice horse. Chas. H. Shirkey, Imperial, Sask. 10-3

**REGISTERED BELGIAN HORSES FOR SALE**. Six mares, two stallions, one three, the other coming two; good stuff; good shape. Come pick a winner. Priced to sell. R. A. Culver, Kisbey, Sask. 11-2

**FOR SALE OR EXCHANGE—REGISTERED** Percheron stallion, imported, glossy black, two calves, good foal getter, five years in district. Particulars, Secretary Wheatstheaf Percheron Horse Co., Wilhelmina, Alta. 11-2

**IMPORTED PERCHERON AND BELGIAN** stallions; great size and quality; sure foal getters. Satisfaction guaranteed. Age two to six. Write for rock-bottom prices. A. L. Watson, Fillmore, Sask. 8-4

**A LARGE PROPORTION OF GRAIN FED TO** horses infested with bots and worms is wasted. Peerless Stock Tonic will eradicate them and aid digestion. Write us. Peerless Products Company, Brandon, Man. 2t

**FOR SALE—CLYDESDALE STALLION**, six years old; sure foal getter; healthy as a trout; winner at Guelph, London, Stratford, Saskatoon; diploma and sweepstakes to his credit. Thomas Johnston, Ardath, Sask. 8-4

**J. W. FOSTER & SONS, BERRY CREEK** Ranch, Natchez P.O., Alta., breeders of Shire and Percheron stallions and mares. Stock all ages for sale. 10t

**PERCHERON STALLIONS AND MARES**—Stallions sold on liberal terms; mares offered for cash only. J. E. Graham, Saskatoon, Sask. 2t

**SELLING—SCOTTY, 1326, BAY, AGE NINE**, weight 1,800. For further particulars apply to Andrew Dudgeon, Darlington R.R. No. 1, Man. 11-2

**WANTED—PERCHERON STALLION FOR** hire, season 1919, under Federal Assistance Scheme. Apply, J. E. Wake, Borden, Sask. 10-3

**FOR SALE—IMPORTED PERCHERON** stallion, Lot 4, 4268 (99981) coming eight. Levern, Lacordaire, Sask. 9-3

**FOR SALE—IMPORTED GREY PERCHERON** stallion, or exchange for young work horses or cattle. Jas. Stewart, Starbuck, Man. 6-10

**SELLING—A BARON'S PRIDE STALLION**. Price reasonable. Apply, Walter Simpson, Brownlee, Sask. 7-3

**U. A. WALKER & SONS, CARNEGIE, MAN.**, Breeder of Clydesdales. Mares and fillies for sale. 23t

**PURE-BRED BELGIAN STALLIONS AND** mares for sale. Louis Nachtigale, North Battleford, Sask. Phone 334, ring 4. 50-17

**BREEDERS' LIEN NOTES FOR COLLECTING**, 50 cents. Stallion service books, 35 cents. J. H. Graham, Saskatoon, Sask. 2t

**SUFFOLK STALLIONS, FROM BEST IM-** ported blood. R. Pease, Ravensrag, Sask. 6-12

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## HORSES (continued)

**CLYDESDALE STALLIONS SALE OR HIRE**. Berkshire sows, bred, for sale. Jos. Jickling, Carman, Man. 8-3

**FOR SALE—BELGIAN STALLION, FOUNDER-** ed. Makes ideal stallion for ranch. Real snap. A. Vogelaar, Bulyea, Sask. 11-2

**FOR SALE—TWO CLYDESDALE MARES IN** foal, imported, price for both, \$300; class stock. Wm. Barr, Glenavon, Sask., Phone. 11-3

**FOR SALE—FIVE PERCHERON STALLIONS**, from two to four years old, class A, none better. Peter Meyer, Gilbert Plains, Man. 11-3

**PERCHERON STALLION FOR SALE. COULD** use a 10-20 and plows. W. R. Barker, Deloraine, Man. 9-3

## HAY AND FEED OATS

**SELLING—THREE CARS GOOD FEED OATS**, 65 cents per bushel, f.o.b.; also three cars oats. Banner, re-cleaned, good vitality, for seed. Write for samples and prices on seed. R. Dalgarno, Newdale, Man. 10-2

**FOR QUICK SALE—SIX CARS OF GOOD** Midland hay, at \$17 per ton, f.o.b. Riverton, Man. Terms, \$30 cash with order, balance, collect. Write V. Eyjolfsson, Riverton, Man. 11-2

**FEED OATS AND HAY—OATS FOR SALE**. I have a large quantity in store Saskatoon and Moose Jaw elevators, giving you Government grades and weights. Write or wire for prices and grades. R. E. Reesor, Saskatoon, Sask. 11t

**SELLING—CHOICE SLOUGH HAY, \$16.50** ton; seven cars good slough hay, \$14.00 ton. Secretary-Treasurer, Invermay Grain Growers' Assn. Ltd., Invermay, Sask. 11t

**SELLING—CAR FEED OATS. SAMPLE AND** price on request. Apply J. S. Paterson, Quill Lake, Sask. 8-4

**FOR SALE—300 TONS CHOICE UPLAND** hay, \$15 per ton; ready for shipment. Max Drab, Wilkie, Sask. 8-4

**GOOD TIMOTHY, ALSO UPLAND HAY AND** wheat greenfeed in carload lots. Write for prices. Leduc U.F.A., Leduc, Alta. 9-4

**HAY FOR SALE—WRITE OR WIRE FOR** Prices. D. E. McNeill, Rockhaven, Sask. 9-3

**FOR SALE—25 TONS GOOD SLOUGH HAY**, \$13 ton. G. Balcombe, Elstow, Sask. 10-2

**WANTED—CAR FEED OATS; SAMPLE AND** price f.o.b. Grain Growers, Gap View, Sask. 11-2

**BUY YOUR OUT-OF-TOWN SUPPLIES WITH** Dominion Express Money Orders. Five dollars costs three cents.

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**KILL THE LICE ON YOUR CATTLE BY USING** Royal Sovereign Animal Lice Killer. Absolutely guaranteed. Not a liquid. Can be applied in coldest weather. 2-lb. tins 75c, 4-lb. tins \$1.25, postpaid. Sovereign Poultry Supply House Ltd., Edmonton, Alta.

**REGISTERED SHORTHORNS—CHOICE SE-** lection in bulls, six to 15 months; Reds and Roans; can spare few females; strong-boned, fleshy, kind. Prices reasonable. Freight paid. Chas. Graham, Fort Peck, Ont. 11-3

**FOR SALE—TWO CHOICE REGISTERED** Shorthorn bulls; one roan, 14 months old; one red and white, 12 months old, \$200 each, f.o.b. Vanscoy. David Clancy, Box 414, Vanscoy, Sask. 11-2

**SHORTHORNS—25 BULLS, 6 MONTHS TO** 8 years; 20 heifers, rising 2 years, not bred, sired by splendid imported bull; 30 young cows and heifers in calf, mostly by Duke of Saskatoon, son of Gainford Marquis. Prices reasonable. J. Bousfield & Sons, Macgregor, Man. 4t

**SELLING—18 GRADE ABERDEEN-ANGUS 2-** year-old heifers, sired by Ned of Glen Laun, No. 4934, bred to come in during June and July; 20 grade Aberdeen-Angus yearling heifers, sired by one of J. D. McGregor's best bulls. All are in first class condition. Apply, T. Ferrier, Brandon Industrial School. 9t

**FOR SALE—YOUNG HEREFORD BULLS**, sired by Bonnie Brae 62nd, full brother Canadian National grand champion three successive years. H. E. Robinson, Carman, Man. 7-6

**SELLING—SHORTHORN BULLS; COWS AND** heifers in calf to Mountain Bard, imported. Also a particularly fine lot of Barred Rock cockerels from imported stock. Phone Carman exchange. Andrew Graham, Roland, Man. 7t

**PUBLIC SALE, MARCH 22, 20 CATTLE**, including Mysias Favorite, 95466; Shenley Favorite, 118896; Shenley Choice, 134554; Shenley Beauty, 134187; freshening this spring. Also year-old bull. Wm. Reeves, Girvin, Sask.

**SELLING—HEREFORD BULL, BOBS, 16857**, at \$250. He is thick set and short legged, weighs 1,300, is dark red color and is well marked. H. W. Belfry, Melita, Man. 10-2

**FOR SALE—HEREFORD BULL, PAT, 19528**, three years old, past; a good animal and a sure stock getter. Maple Glen Stock Farm, Richard Brigham, Deleau, Man. 11-2

**SEVEN INTENSELY BRED JERSEY BULLS**, bred for exhibition and production. Pedigrees and prices on application. W. J. Williamson, Fort Saskatchewan, Alta. 7-3

**REGISTERED ABERDEEN-ANGUS MALES** (June calves), low set, sturdy fellows, \$150 each. Connor & Hutchinson, Goodwater, Sask. 8-9

**REGISTERED RED POLLED CATTLE—STOCK** for sale. E. & W. Darnbrough, Laura, Sask.

**BROWNE BROS., NEUDORF, SASK., BREED-** ers of Aberdeen-Angus cattle. Stock for sale.

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With hundreds of the best breeders in Western Canada The Guide has demonstrated its ability to produce sales from classified ads. After all this is the important thing—can the ads. sell the stuff? The following letters will answer for The Guide.

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These were the ads. they ran:

**GUARANTEED PURE - BRED WHITE** Wyandotte cockerels, \$3.00 each. Hatching eggs in season, \$3.00 per 30; \$3.00 per 100. R. Wyler, Luseland, Sask. 10-3

**McOPA EGGS FROM BRED-TO-LAY** Barred Rocks, all winter layers, not just March starters, \$2.00 per 15; \$3.50 per 30; \$5.00 per 45. W. R. Barker, Deloraine, Man. 14-4

**BARRONS' LARGE BRED-TO-LAY** Single Comb White Leghorns. Eggs, \$1.50 fifteen; \$4.00 fifty; \$7.00 hundred. E. Anderson, Fleming, Sask. 11-8

## EFFECT

These were the results they got:

April 8, 1918—My ad. ran first three weeks in March. Sold all my cockerels and 370 eggs to date.

April 20, 1918—Continue my egg ad. Am having lots of sales.

April 30, 1918—My ad. has sold \$100 worth of eggs for me the past month.

REMEMBER IF WE CAN DO IT FOR THEM WE CAN DO IT FOR YOU

Your instructions should reach us Wednesday of the week preceding that you wish your ad. ran. The rate is economical—7c. a word—payable in advance.

THE GRAIN GROWERS' GUIDE, Winnipeg, Man.

## The Grain Growers' Guide

## CATTLE (continued)

**SELLING—HOLSTEIN MALES AND FEMALES** Want dairy heifers in exchange for horses. D. Howell, Yorkton, Sask. 9-4

**GALLOWAY BULLS, REGISTERED, FOR SALE** from six to fifteen months. R. A. Wallace, High River, Alta. 49t

**BROOKSIDE FARM SHORTHORNS, FOR** sale—Young bulls. Prices \$125 to \$200. D. G. Adamson, Gladstone, Man. 49t

**SELLING—PEDIGREE HOLSTEIN BULL**, age three years four months. Humphreys, Station C, Fort Rouge, Man.

**SHORTHORN BULLS—TWO, ELEVEN** months, dark-red, good ones, \$175 each. R. J. Phin, Moosomin, Sask. 11-3

**CHOICE REGISTERED YEARLING RED POLL-** ed bull for sale. Frank Crawshaw, Macoun, Sask.

**FOR SALE—THREE GOOD HEREFORD** bulls, rising one year old. Apply to W. G. Wyatt, Rocanville, Sask. 11-2

**SELLING—REGISTERED SHORTHORN BULL** rising three, quiet; good stock getter; cheap. H. N. McNaughton, Ardath, Sask. 9-4

**WORLD'S CHAMPION RED POLLED CATTLE** Jean Du Luth Farm, Duluth, Minn. Bulls for sale. 49t

**SELLING—TWO PURE-BRED SHORTHORN** bulls. Hugo Yeske, Langenburg, Sask. 11-3

## SWINE

**FOR SALE—REGISTERED DUROC-JERSEYS;** one sow, safe with pig, 20 months old, weight about 600 pounds, a beauty, for \$75; boar, same age, weight about 500 pounds, \$50. Fred Clark, Willows, Sask.

**DUROC-JERSEYS—ORDERS BOOKED FOR** pure-bred spring pigs, pairs or trios, unrelated. One, \$15; two, \$28; three, \$40; best quality. Small deposit. Everett MacNutt, Saitcoats, Sask. 11-3

**BIG TYPE POLAND-CHINAS THAT GO OVER** the top. Champion and imported stock. Not all Poland-Chinas are big type. C. A. Hulse, Togo, Sask. 8-4

**BERKSHIRES—LARGE STOCK, PRICED** right, English, American and Canadian strains. Send for breeding list. Credit Grange Farm, Meadowvale, Ontario. 10-10

**FOR SALE—DUROC-JERSEY BOAR, FROM** pedigree stock, only \$45, weight about 300, two years old. A. Lewis, Vanscoy, Sask. 10-2

**BERKSHIRES, REGISTERED, FARROWED** 31st Jan.; sows, \$12, Boars, \$10. Chas. Gordon, Adanac, Sask. 10-2

**REGISTERED DUROC-JERSEYS BRED SOWS** for sale. Wallace Drew, Treherne, Man. 10-2

## DOGS

**AT STUD—IMPERIAL RACING GREYHOUNDS**, also pups and six trained dogs left. These kennels hold Saskatchewan record for coyote catching. Pleasant Valley Kennels, Abernethy, Sask. 10-3

**SELLING—IRISH WOLF HOUND, TWO** years, female; greyhound, one year; both good killers and fast, \$25 each. Wesley Nell, Scott, Sask. 10-2

**FOR SALE—PURE-BRED NEWFOUNDLAND**, female, and three pups. Write Jack Ellis, Shaunavon, Sask. 11-3

**FOR SALE—SCOTCH COLLIE PUPS FROM** working stock. Males, \$10.00; females, \$8.00. C. M. Brett, Francis, Sask. 9-2

**FOR SALE—SIX WOLFDOUNDS, BROKEN** on coyotes. Thomas Rattray, Killam, Alta.

**FOR SALE—GOOD HOUNDS, PRICE REASON-** able. Box 88, Wetaskiwin, Alberta. 11-2

**FOR SALE—GOOD KILLING WOLFDOUNDS**. Box 50, Three Hills, Alta. 11-2

## POULTRY

**SELLING—R. C. RHODE ISLAND REDS**. Being unable to give all my poultry the necessary attention I have decided to sell the following: 10 hens, all prize-winners, \$10 each; 10 pullets, that can win prizes, \$10 each; 20 pullets, very cheap, at \$5.00 each; 30 pullets, all good birds, \$3.00 each. D. J. McDonald, 503 Union Bank Building, Winnipeg, Phone M. 3966. 11-2

**DAYS LAND POULTRY YARDS—BREEDER OF** S.C. White, S.C. Brown Leghorns; Barred Rocks; Buff Orpingtons; White Wyandottes; Rhode Island Reds, both combs. Eggs, \$2.00 per setting. Chicks, stock and cockerels for sale. Correspondence invited. A. W. Sharp, Daysland, Alberta.

**FEW LEFT OF MY BRED-TO-LAY ROSE** Comb Rhode Island Reds, clearing out, from \$4.00 to \$5.00 each; also six S.C. Pullets, \$2.00 each. Bookin orders for eggs in season, \$3.00 per setting of 15. Mrs. J. J. Dane, Howard, Sask. 10-2

**POULTRY SUPPLIES—LEG BANDS, ALU-** minum, 90c 100; celluloid colored spiral, \$1.00 100; egg boxes, 15 eggs, \$2.00 doz.; 30, \$3.00; incubator thermometers, \$1.00. Everything for poultrymen. Beautiful catalogue free. Britt Mfg. Co., Winnipeg. 6t

**2 RHODE ISLAND RED COCKERELS, SINGLE** comb, from good winter-laying strain, beautiful color, no smut, won first and second prize at Swift Current. First at Seven fifty, second at six dollars, on approval. Blaxall, Gen. Del., Regina, Sask.

**SELLING—MAMMOTH BRONZE TURKEY** Toms, 20-23 lbs., C. C. Shoemaker's strain. \$9.00 each. Miss F. Hughes, Goodlands, Man. 10-4

## POULTRY (continued)

**LONGMORE'S CHAMPION WHITE WYANDOTTES** better than ever. Few choice cockerels, \$5.00 each; have been breeding them for 25 years; also few Buff Orpingtons, custom hatching; also baby chicks. John C. Longmore, 11825 85th Street, Edmonton, Alta. 10-2

**FOR SALE—RHODE ISLAND RED COCKERELS**, rose comb. Beautiful, dark red, well developed birds. No smut. \$5.00 and \$7.50 each. Satisfaction guaranteed. William La Chapelle, McTaggart, Sask. 6-7

**SELLING—A LIMITED NUMBER OF BARRED** and White Rock cockerels, raised on separate farms. While they last prices are \$5.00, \$4.00 and \$3.00 each. Walter James & Sons, Rosser, Man. 9-4

**FOR SALE—THREE S.C.W. LEGHORN COCKERELS**, at \$3.00 each, or the three for \$7.50; three White Rock cockerels, at \$4.00 each; yearling White Wyandotte, at \$5.00. All pure-bred stock. James Firth, Carievale, Sask., Box 115. 10-2

**WHITE LEGHORN AND CAMPINE PULLETS**, line bred Hogan selected for years, \$2.50 and up. Also breeding pens. Pullets laying at four months old. Hatching eggs, \$3.50 for 15. Box 50, Penttont, B.C. 10-3

**ROSE COMB RHODE ISLAND REDS**, LARGE, well matured, vigorous cockerels, from prize-winning stock, and good layers, \$3.00 to \$5.00 each. Mrs. Wm. Hanson, Box 62, Tessier, Sask. 10-2

**PURE-BRED BUFF ORPINGTON COCKERELS**, bred from prize stock, \$3.00, \$5.00 each; pullets, \$2.50 each. Quality and satisfaction our motto. James Dykes, Elbow, Sask. 10-2

**SELLING—PURE-BRED WHITE ROCK COCKERELS**, the finest ever raised. Eggs in season for hatching. Chas. A. Weaver, Deloraine, Man. 7-1

**PURE BARRED PLYMOUTH ROCK COCKERELS**, from prize winners, fine specimens, \$5.00 each; \$9.00 pair. Joseph G. Parker, Nobleford, Alta. 9-3

**SELLING—ROSE COMB RHODE ISLAND** Reds, Fletcher strain; rich, dark-red color, good under color; very special cockerels, \$5, \$10 and up. Mrs. D. V. Runkle, Estlin, Sask. 9-5

**ORDERS TAKEN FOR EGGS, BARRED ROCK**, from prize-winning stock at the Winnipeg Show, held February, 1919, \$3.00 per setting of 13. W. C. Davis, P. O. Box 161, Springdale, Sask. 9-4

**RHODE ISLAND RED COCKERELS**, BOTH combs, descendants of A. C. Russell's famous prize-winners, \$3.00 to \$5.00 each. Eggs in season. Write D. L. Doane, Vulcan, Alta. 11-2

**WHITE WYANDOTTE PULLETS**, \$3.00. UN-related pens supplied. Eggs, \$10 per 100, \$1.50 per dozen. Chicks, 35 cents. Florence Brook, Dilke, Sask. 11-3

**PURE-BRED WHITE WYANDOTTE CHOICE** cockerels, \$3.00 to \$5.00. Hatching eggs in season, \$1.50, setting of 15. W. J. Rex, Box 227, Holland, Man. 11-2

**WHITE ROCK COCKERELS**, \$3.00 EACH. Hatching eggs, in April, \$3.00 for 15 eggs, from prize strain. Thos. Common, Hazel Cliff, Sask. 11-2

**ROSE COMB RHODE ISLAND RED COCKERELS**, prize-winning stock, winter layers, \$3.00 each; select, \$4.00. G. A. Hope, Wadena, Sask. 11-5

**PURE-BRED BARRED ROCKS**, WINTER LAYING strain, \$3.00 each; also eggs for setting in season, \$3.50 per 100, or \$2.00 for setting of 15. Mrs. J. M. Ruddell, Elm Creek, Man. 11-2

**30 BIG THRIFTY BARRED ROCK COCKERELS**, \$3.00 each. Have bred them for 20 years. Eggs, \$3.00 setting. F. Merritt, Melita, Man. 11-2

**PURE-BRED WHITE ROCK COCKERELS**, large, healthy, vigorous birds, \$3.00 each. Eggs in season for hatching. George Grant, Stor-thoske, Sask. 11-2

**SELLING—BARRED ROCK PULLETS**, \$2.50; cockerels, \$3.50; Gillies' strain White Wyandotte cockerels, Guild's strain, \$5.00. Chas. Bridge, Elbow, Sask. 11-2

**SELLING—PEN BUFF ORPINGTONS**, FOUR pullets, one cockerel, Owen's farm stock, \$30; also Pen Black Poland. Lewis Hawkins, 729 Elgin Ave., Winnipeg, Man. 11-2

**BRED-TO-LAY WHITE WYANDOTTES**, Martin's Dorcas and Tom Barron strain. Eggs, \$3.00 per setting, two settings, \$5.00, postage paid. Albino Poultry Farm, Morden, Man. 11-4

**FOR SALE—CHOICE PURE-BRED WHITE** Wyandotte cockerels, old bird Agricultural College stock, \$4.00 to \$6.00 each. R. M. Salkeld, Gerald, Sask. 10-2

**MARTIN'S AND BURGESS REGAL WHITE** Wyandotte cockerels, from winter laying stock, \$3.00, \$4.00; Mammoth Bronze turkey hens, \$5.00. M. Ewins, Bethany, Man. 10-2

**ROSE AND SINGLE COMB RHODE ISLAND** Red cockerels, \$4.00, pullets and year-old hens, \$2.50; Handans cockerels, \$3.00, pullets, \$2.75. Jas. Sparke, Ridgeville, Man. 10-2

**BARRED ROCK COCK, WON SECOND AT** Calgary; also large, nicely barred cockerels. For prices write. T. E. Bowman, Aldersyde, Alta. 10-3

**BARRED ROCKS, BUFF ORPINGTON COCKERELS**, first-class stock, \$5.00 each. J. T. Bate man & Sons, Wolsley, Sask. 6-4

**FOR SALE—PURE-BRED SINGLE COMB** White Leghorn Cockerels, \$2.00 each, 3 for \$5.00. James Gifford, Glenside, Sask. 9-3

**WHITE WYANDOTTE COCKERELS**, APRIL and May hatched, large, pure white, \$2.50, \$3.50 \$4.00. Mrs. Wussow, Churchbridge, Sask. 8-4

## POULTRY (continued)

**CHOICE BRED-TO-LAY BUFF ROCK AND** White Wyandotte eggs for hatching, \$1.50 for 15; \$2.50 for 30. G. H. Anderson, Dugald, Man. 10-4

**RHODE ISLAND RED COCKERELS**, BOTH combs, \$3 and \$5 each, while they last. Frank Holmes, Red Specialist, Broadway, Saskatoon. 9-3

**PURE-BRED BARRED ROCKS**, SPLENDID winter layers, \$2.00 per setting. Mrs. Dumbrell, Charleswood, Man. 10-8

**PURE-BRED TURKEY GOBBLERS**, \$6.00; pure-bred White Emme ganders, \$5.00. Albert Bakken, Excel, Alta. 10-3

**SELLING—ROSE COMB WHITE WYANDOTTE** cockerels, \$3.00 each, \$5.50 a pair. Peter Patterson, Rosebank, Man. 10-3

**PURE-BRED WHITE LEGHORN COCKERELS**, combs slightly frosted, \$1.50 each. E. Knouse, Mildon, Sask. 10-2

**CHICKS, HATCHING EGGS, S.C. WHITE** Leghorns. Catalogue. Cookville Poultry Farm, Cookeville, Ont. 11-4

**ROSE COMB R. I. RED COCKERELS**, CHOICE birds, rich color, \$3.50 to \$5.00. W. Bach, Willows, Sask. 11-2

**FOR SALE—PURE-BRED BARRED ROCK** cockerels, \$2.00 to \$5.00. Wm. T. Myers, Assiniboia, Sask. 11-2

**PURE-BRED ROSE COMB BROWN LEG-**horn cockerels, \$3.00. Wesley Coram, Red Deer, Alta. 11-2

**BUFF ORPINGTON COCKERELS**, Sired by second cockerel, Regina Show, November, 1917, \$5.00 each. E. Anderson, Fleming, Sask. 10-2

**PURE-BRED ROSE COMB RHODE ISLAND** Red cockerels, \$5.00 each. John S. Daley, Foam Lake, Sask. 10-2

**PURE-BRED ROSE COMB WHITE WYAN-**dotte cockerels, fine matured birds, \$2.75 each. Harold Wiedrick, Kinley, Sask. 9-3

**ROSE COMB RHODE ISLAND RED COCK-**erels, special bred, laying strain, \$3.00. A. Hooley, Eyebrow, Sask. 10-2

**WHITE WYANDOTTE COCKERELS**, AND eggs. George Colbeck, Regina. 10-2

**WHITE ROCK COCKERELS**, \$3.00. MRS. Tutt, Rouleau, Sask. 11-2

**CHOICE PURE-BRED BUFF ORPINGTON** cockerels, \$3.00 each. T. E. Helam, Medora, Man. 11-2

**PURE-BRED ROSE COMB RHODE ISLAND** Red cockerels, \$2.50, three for \$6.00. Elden F. Renwick, Coulterville, Man. 11-2

**BARRED ROCK COCKERELS**, \$3.00 EACH. F. Ears Woods, Lashburn, Sask. 11-2

**SELLING—LIGHT BRAHMA COCKERELS**, \$3.00 each. Mrs. W. J. Willson, Arcola, Sask. 10-3

**PURE-BRED BARRED ROCK COCKERELS**, \$3.00. J. Huston, Carman, Man. 10-3

**SELLING—PURE-BRED BARRED ROCK**, EGGS \$1.00 dos. Mrs. A. Tooth, Etna, Man. 9-3

## LUMBER, FENCE POSTS, ETC.

**WILLOW FENCE POSTS, A1 QUALITY**, FOR immediate shipment in car lots; also dry and green cordwood in car lots. For further particulars, write Leduc U.F.A. Co-operative Assn. Ltd., Leduc, Alta. 8-6

**FOR SALE—CORDWOOD, SEASONED POP-**lar, 4 ft. lengths. Oak fence posts, 10,000, 2-3 inch, 6 ft. high. Write for carload prices and particulars. Rev. Stephen Soos, Esterhazy, Sask. 8-4

**FENCE POSTS AND CORDWOOD—RED** tamarac fence posts and tamarac and spruce cordwood at lowest prices. Write for prices. V. Eijolfsson, Riverton, Man. 8-4

**SELLING—FENCE POSTS, PICKETS, POLES**, dry or green tamarac, in straight or mixed car lots, wholesale prices. Wood Vallance, Saskatoon. 8-4

**FENCE POSTS—SPLIT CEDAR, ROUND TAM-**arac and willow fence posts. Write for carload prices delivered. Enterprise Lumber Co., Edmonton, Alta. 11-2

**FENCE POSTS—RED TAMARAC FENCE** posts and cordwood. Lowest prices. Write to Sigurdson & Reykdal Ltd., Arborg, Man. 11-2

**TAMARAC POSTS WANTED. WILL TRADE** sound young horses. N. Brisbin, Viceroy. 11-2

## GENERAL MISCELLANEOUS

**DON'T SACRIFICE YOUR VICTORY BONDS.** If you must sell them, deliver or send them to me by registered mail and get the full cash value. I specialize in government bonds and recommend them for investment. J. B. Martin, Member Winnipeg Stock Exchange, 704 McIntyre Bldg., Winnipeg, Man. 8-1

**SPRUCE WATER TANKS, ANY SIZE OR** shape, factory price. Stronger, cheaper and better than galvanized iron. Quick service. Brett Mfg. Co., Winnipeg. 49-1

**BARGAIN—200 OPEN TEAM BRIDLES**, \$2.25 each; 150 dog harness, \$2.50 each; 200 connecting straps for hitching horses abreast, \$1.00 pair. Order early. Steensson Bros., Preeceville, Sask. 11-2

**PEERLESS GEAR OILER PREVENTS OUT-**ting, saves oil, labor. Fits any tractor. Get your tractor equipped now. Brett Mfg. Co., Winnipeg. 49-1

**RED TAMARAC FENCE POSTS, CORDWOOD** and White Wyandottes. E. Restrick, Arborg, Man. 10-2

**RAW FURS WANTED—1,000 BEAVER**, 20,000 rats, and all other furs. Highest prices paid, also all charges. Write W. C. Davis, P.O. Box 161, Springdale, Sask. 11-4

## SEED GRAIN

**IMPROVED MARQUIS WHEAT—FOR SALE A** few hundred bushels of Improved Marquis. Hand selected for six years and raised from seed with which I won the world's prize for dry farmed wheat in 1917. This wheat would have been registered with the Canadian Seed Growers' Association this year as second germination but is slightly frosted. Berries are large and plump. Government germination test 99%. Price, \$2.60 per bushel in ten or more bushel lots. Cotton bags 25c. per bushel extra. J. S. Fields, Box 374, Regina, Sask. 10-2

**SELLING—SEED AND FEED GRAIN. BALED** upland prairie and slough hay. Green wheat, barley and oat sheaves, oat straw. Baled goods can be shipped to farmers free of freight before April first. Write or wire for particulars. Dan J. Dupius, Ponteix, Sask. 7-6

**MALTSTER BARLEY, ENORMOUS YIELDER**, earliest, heavy-grained, even-aisled variety; Government germination 98%; choice seed, \$1.50 including bags; Golden Flax, absolutely pure, \$5.00 bushel, bagged. Supplies limited. S. V. Cowan, Waldeck, Sask. 10-2

**FOR SALE—70 BUS. KITCHENER WHEAT** by member of the Canadian Seed Growers' Association; three years careful selection, price \$5.00 bus., sacks extra. Seed lot from Seager Wheeler, 1916. Dan Stewart, Cairns, Alta. 11-2

**FOR SALE—ONE CARLOAD OF ALSAMAN** oats, sample graded No. 1 seed by Government Inspector, germination test 95 per cent, price 90c. per bushel. Chas. Tennant & Sons, Binacarth, Man. 11-3

**PREMOST AND NORTH DAKOTA 52 WILT-**resistant seed flax, extra choice quality and absolutely free from noxious weeds, \$4.50 per bushel. Seed houses quoting \$5.50 for same varieties. Wm. Webb, Rosetown, Sask. 11-3

**QUANTITY SECOND GERMINATION MAR-**quis wheat, early strain, grade one, 66 per measured bushel, no weeds, certificate and seal attached, sacks free, \$3.75 bushel. A. D. Perry, Coronation, Alta. 10-2

**BROME GRASS SEED, GOVERNMENT** germination test, free from noxious weeds, also Timothy—Brome, \$20; Timothy, \$10 per 100 lbs.; bags 75c. and 60c. each, f.o.b. C.P.R. Geo. B. Seabrook, Plunket, Sask. 10-3

**BIG, STRONG TESTED SEED. SOLD UNDER** clearly defined brands. Every bag tagged with grade and germination. Catalog on request. Harris McFayden Seed Co., Farm Seed Specialists, Winnipeg, Man. 4-1

**PRODUCERS' REGISTERED SEED—REGIS-**tered Marquis seed for sale, improved, heavy-yielding strain, the kind that will help produce bumper crops, \$3.00 per bushel. F. J. Anderson, 655 Grain Exchange, Winnipeg. 7-1

**SELLING—PURE MENSURY SEED BARLEY**, guaranteed absolutely free from noxious seeds. Also Banner oats, similar quality. Viewfield Farm, Oak Bluff, Man., or 932 Grosvenor Ave., Winnipeg. 9-2

**SELLING—ONE CAR LOAD GARTON'S 22** oats, Government germination test 95%, free from wild oats and noxious weeds, 95c. bus., f.o.b. Atwater, Sask. Sample on request. B. C. Karstad. 10-2

**ABOUT 600 BUS. SEGER (VICTORY) OATS**, reseeded, \$1.25 bus., bags extra. Carload Malster Barley, pure variety, early maturing, f.o.b. Headingly or Rosser, C.P.R. Samples 10c. O. Philippi, Headingly, Man. 10-3

**SELLING—REGISTERED MARQUIS WHEAT**, six years hand selection, heavy-yielding strain; \$6.30 per two-bushel sack. Inspected and sealed by Government Inspector. Sample on application. C. Genge, Glidden, Sask. 10-3

**FOR SALE—2,500 BUSHELS FRENCH LIZO** seed oats, heavy yielding, 95% germination. Prices and sample on request. 100 bushels Premost flax. Charles McLean, Kaleida, Man. 9-3

**REGISTERED MARQUIS WHEAT IN SEALED** bags, beautiful seed. Write for sample. Harris McFayden Seed Co. Limited, Farm Seed Specialists, Winnipeg. 10-1

**VICTORY OATS No. 2, 99% TEST**, \$1.00; spring rye, \$1.75; fall rye, \$2.00; bags extra, f.o.b. Carman. Sample on request. W. F. Somers, Carman. 10-3

**FOR SALE—CAR LOAD REGENERATED BAN-**ner oats, Government test 90%. Sample and price on application to Geo. Henderson, Saltcoats, Sask. 10-2

**SELLING—WHEELER'S IMPROVED PRESTON**, absolutely pure, grown on breaking, \$2.40 per bushel, f.o.b. Blaine Lake. Sacks extra. R. H. Gabrielson, Blaine Lake, Sask. 9-1

**FOR SALE—KITCHENER WHEAT, GROWN** from seed I bought from Seager Wheeler, grown on new breaking, price \$3.50 per bushel, bags extra. Write J. H. Peel, Bethune, Sask. 11-2

**MIXED SEEDS—GOOD, CLEAN TIMOTHY** and Alsike, \$20 per cwt., bags included. Freight paid on 500 pounds or more. Kenora District Seed Assn., Ordrift, Ont. 11-2

**BANNER SEED OATS, 5,000 BUSHELS. PRICE** and sample on request. Timothy seed, 13 cents; Rye grass seed, 20 cents. G. W. Quinn, Macgregor, Man. 11-13

**SELLING—1,000 BUS. WINTER RYE SEED**, \$2.40 per bus., bags included. W. Shearer, Oakesboro, Sask. 10-3

**SELLING—CHAMELION SWEET CLOVER**, dwarf yellow. Potatoes, 30 new varieties. John Redrick, Struth South Dakota. 7-5

**KITCHENER WHEAT, CLEANED, READY FOR** seeding, \$3.00 bushel, sacks 60c. each. Smith Bros., Birle, Man. 10-3

**SELLING—WESTERN RYE GRASS SEED**, 20c. lb. Sample on application. Percy Harris, Baldu Man. 10-3

**SELLING—5,000 BUSHELS BANNER SEED** oats. William Brayshaw, Kelso, Man. 8-6

## SEED GRAIN—continued

**OATS—PLUMP, VIGOROUS, GERMINATION** 96-98, \$1.00 bushel. T. Hargreaves, Huxley Alta. 10-2

**SELLING—SEED SPELTZ, CLEANED**, \$1.75 bushel. Sacks free. H. C. Colter, Crystal City, Man. 10-3

**FOR SALE—FLAX SEED, CLEANED**, \$4.00 bushel; bags included. Sample on request. Percy Vigar, Treherne, Man. 10-2

**MENSURY BARLEY**, \$1.25; TWO-ROWED barley, \$1.50 per bushel, bags included. E. Young, Oak Lake, Man. 9-3

**FOR SALE—SPRING RYE, NO NOXIOUS** weeds, sacks included, \$1.60 per bushel. Write W. C. Brethour, Miami, Man. 9-3

**O.A.C. SEED BARLEY, HIGH GERMINATION**, \$1.25 bushel, bags included. R. Graham, Melita, Man. 11-2

**CHOICE MENSURY BARLEY, CLEANED**, germination 97%, \$1.00 per bushel, sacks extra. R. Dickie, Melfort, Sask. 11-3

**FOR SALE—2000 BUSHELS SEED BARLEY**, six-rowed; 90 cents a bushel, f.o.b. Keystown George Arthur, Pense, Sask. 10-2

**WANTED—SIXTY-DAY OATS. MUST BE** clean. Send sample and price to John Milton, Sinclair, Man. 10-2

**SEED OATS—LARGE OR SMALL QUANTI-**ties supplied. State variety preferred. Sample and quotation from Fredrick Ind, Lloydminster 10-4

**SELLING—SIXTY-DAY OATS. J. POMEROY**, Roblin, Man. 8-7

**SEED FLAX—COMMON, \$4.00 PER BUSHEL**, bags extra. W. S. Dale, Viscount, Sask. 9-4

**SELLING—SPRING RYE, \$1.75 BUSHEL. ALEX** Godfrey, Carberry, Man. 10-2

**RED BOBS WHEAT, \$30 PER BUSHEL. H.** Sorby, Keddleston, Sask. 11-3

**THE SAFE WAY TO SEND MONEY BY MAIL** is by Dominion Express Money Order.

## REGISTERED SEED

No seed may be sold as registered seed except that which is inspected, sealed and tagged by an inspector of the Canadian Seed Growers' Association. All registered seed is inspected in the field while growing to ensure its purity, and is further inspected after cleaning to ensure its high quality. All registered seed is guaranteed pure as to variety, free from seeds of other cultivated plants, free from noxious weed seeds, well matured, clean, sound, plump, well colored and germinating not less than 95 per cent. Registered seed is undoubtedly the highest quality of seed grain and potatoes available. Its production requires infinite painstaking and patience and its value is much more than that of ordinary seed.

**SELLING—REGISTERED MARQUIS SEED**, IN two-bushel bags, \$3.20 bushel, f.o.b. Headingly. Also Improved Marquis in bags, \$2.90 bushel. F. W. Watt, 309 Merchants Bank Bldg., Winnipeg, Man. 11-2

**O.A.C. BARLEY FROM REGISTERED SEED** high germination, \$1.35 for quick sale, bags extra. W. C. FitzGerald, Grenfell, Sask. 7-4

## NURSERY STOCK

**GARDEN AND FIELD SEEDS. WRITE FOR** free illustrated catalogue of pedigreed garden and field seeds, seed potatoes, etc. Pike & Co., Seedsmen, Edmonton, Alta. 7-7

**FRUIT TREES, ORNAMENTALS, WIND-**breakers, flowers. Catalog Valley River Nursery, Valley River Man. 8-10

## POTATOES

**POTATOES—EMPIRE STATE, \$2.00 PER** bushel, bags included. Have grown these four years and find them the best yielder of any variety yet grown. Quality excellent. H. W. Harvey, Rapid City, Man. 8-4

**SELLING—FIRST CLASS SEED POTATOES**, Drier's standard, in carlots, \$1.00 bus., f.o.b. Rivers; bags extra. L. Tenhaaf, R.R.1, Rivers, Man. 9-3

**FOR SALE—A LIMITED QUANTITY OF EARLY** Ohio potatoes, \$1.50 a bushel, bags included, grown from McKensie's seed. Jas. Mattick, Qu'Appelle, Sask. 10-2

**POTATOES—CARMAN No. 1, \$1.50 BUSHEL**, bags included. These averaged over 200 bushels per acre last year; finest quality. Mervin Clark, Swan Lake, Man. 11-2

**FOR SALE—POTATOES. REV. STEPHEN** Soos, Esterhazy, Sask. 8-4

**CAR OF POTATOES FOR SALE. APPLY** Lavinia G.G. Assn., Lavinia P.O., Man. 9-4

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## FARM MACHINERY

**FOR SALE OR EXCHANGE—40 H.P. FLOUR** City engine; eight frame John Deere engine gang, six breakers and six stubble bottoms; 36 x 66 Aultman-Taylor separator; cook car and range. Outfit for \$2,100. Will exchange for cattle. Apply Neil McLeod & Sons, at Champion or Basano, Alta. Box 132. 8-4

**FOR SALE—ONE MARSHALL SONS 25-70** H.P. tractor, one John Deere 12-furrow gang plow, one Sawyer-Massey 36-60 separator. All in first-class condition. Will sell at snap for cash or on terms to a good party. Thos. Hodgson, Clair, Sask. 8-4

**SEED CLEANING MACHINES. TELL US** what you wish to clean. We have for sale several good-as-new machines that we have replaced with others of larger capacity. Harris McFayden Seed Co. Limited, Farm Seed Specialists, Winnipeg. 10-11

**BUILD YOUR OWN STUMP PULLER. YOU** can do it from the timber off your own place. The hardware you need you can get from your local store. \$1.00 brings the complete plans, money back if not pleased. Home Made Stump Puller Co., 200 Hargrave Bldg., Toronto, Ont. 11-2

**THRESHING OUTFIT—CASE 28-80 H.P.** steam tractor; 33-56 inch Reeves Separator, with Garden City Feeder; two complete tanks. Reason for selling scarcity of water. Genuine bargain, \$2,000. John Williamson, Kincaid, Sask. 11-2

**WANT A BELT POWER TRANSMITTER FOR** your Ford? Don't pay more than \$12.50 for it. Buy the Simplex. Simplest, handiest, most practical. Circular free. Frank R. Weisgerber, Salina, Kans. 9-3

**SELLING—I.H.C. ENGINE, 25-45, WORKED** two years, lately overhauled, \$2,000. Will take stock or Winnipeg property in exchange. I. Sullivan, Suite 14, Dubuc, Provencher Ave., St. Boniface, Man. 11-2

**SELLING—30-60 MOGUL KEROSENE-BURN-** er engine, extension rim; Nicola Shepherd Separator, 30-54, almost new; eight-furrow P.O. engine plows. All good shape. Snap, for cash. Morely Wilson, Creelman, Sask. 11-2

**HAVE THREE COMPLETE THRESHING** outfits, also 30-60 Hart Parr kerosene engine, with breaking and stubble plows. Will exchange for young stock, clear land or sheep. If interested write, Steensson Bros., Preeceville, Sask. 11-2

**FOR SALE—SIX-FURROW RUMELY STUBBLE** bottoms, gang; two extra shares; plowed about 125 acres; also Stewart Sheaf Loader, used one week. Price, \$250 each. J. H. Shier, Hamiota, Man. 11-2

**SECOND-HAND PLATFORM SCALE, CAPA-** city about 6,000 or 8,000 pounds. State particulars and price to Abbott Grain Growers, Lussland. 8-4

**NEW FORDSON—SAVE MONEY IF YOU** want one. Let me tell you what I know. Use Fairbanks 6 H.P. shopping outfit. Williams, Neilburg, Sask. 10-3

**FOR SALE—ONE SET INTERNATIONAL** engine discs, tandem, 12 ft. inthrow and outthrow, in good condition, a snap, \$150. Jas. C. Halford, Sinitaluta, Sask. 10-2

**FOR SALE—CASE 10-20 KEROSENE TRAC-** tor, with three-bottom detour plow. Plowed only 125 acres. Price \$1,450. D. Heppner, Lowe Farm, Man. 10-2

**EIGHT-FURROW SELF-LIFT ENGINE GANG,** stubble and breaker bottoms, extra shares, good as new; too large for my engine. Particulars, Box 54, Strone, Alta. 11-2

**SELLING—ALMOST NEW 10-20 TITAN TRAC-** tor and three-furrow Hamilton plow, both bottoms. Good reasons for selling. W. Lucas, Loughheed, Alta. 11-2

**SELLING—45-25 OIL PULL, EIGHT-FURROW** plow, stubble bottoms, two sets shares, six breakers. First-class condition; snap. Dan Boychuk, St. Arathe, Man. 11-2

**FOR SALE—FOUR-BOTTOM OLIVER BREAK-** ing plow, perfect condition, plowed less than 100 acres, eight shares, \$240. A. Beckett, Glenavon, Sask. 11-2

**SELLING—28-48 NEW RACINE SEPARATOR,** fully equipped, in good shape; also new three-furrow La Crosse tractor gang. Apply Box 112, Melfort, Sask. 11-3

**ONE SIX-BOTTOM P & O ENGINE GANG.** No more use for it. Will sell cheap for cash. Write W. E. Jennings, Craigmyle, Alta. 11-2

**SELLING—TITAN 10-20 TRACTOR AND** Deere plows, also discs. In good shape. Snap. Write Ostlund Bros., Eastend, Sask. 11-2

**WANTED—THREE 24-INCH JUMBO BREAK-** ers, second hand. Write James Wilson, Star City, Sask. 11-2

**HART-PARR ENGINE, 30-60. GOOD AS NEW** and priced to sell. Write A. L. Watson, Fillmore, Sask. 8-4

**FOR SALE—TWO GRAIN CLEANERS IN** good repair. Pilot Mound Grain Co., Pilot Mound, Man. 9-4

**WANTED, FOR CASH, LOW DERRICK BOR-** ing machine. Write, E. A. McKerricher, Horison, Sask. 10-2

**WANTED—ONE SECOND-HAND 14-INCH** Sulk breaking plow, preferably John Deere. C. R. Snyder, Hamrik, Man. 11-4

**SELLING—12-25 CASE TRACTOR, GOOD AS** new, \$1,500, \$500 cash, balance in fall, or 10% off for cash. Box 3, Langdon, Alta. 11-2

**SELLING—AT A BARGAIN, NEARLY NEW,** 12-25 Avery Tractor. Apply Box 12, Three Hills, Alta. 11-2

**WANTED—ONE 20-INCH STEEL BREAKER.** A. G. Avery, Benito, Man. 9-3

**SELLING—30-60 RUMELY OIL PULL, GOOD** shape. H. McManus, Colgate, Sask. 9-3

**SELLING—BIG FOUR 30-60 TRACTOR. EN-** quire, K. Johnston, Verigin, Sask. 10-3

**SELLING—DEERE EIGHT-FURROW GANG,** \$250. Saunders Bros., Souris, Man. 11-2

## FARM LANDS

**UNITED GRAIN GROWERS SECURITIES CO.** Ltd., 59 Canada Life Building, Regina, Sask.

**PRINCE ALBERT DISTRICT—THREE-** quarter-section laying along railway and half mile from station. The soil is black loam on clay subsoil, free from stones; 16 acres in oats last year, 125 acres arable open prairie, 319 acres in good grazing land, being sheltered by scrub and poplar bluffs. Water is obtained from flowing creek which crosses one quarter, also 20-foot well. There is frame house 16 x 18 with 12 x 20 kitchen, shed 14 x 18, barn 18 x 24, all in good condition. The price is \$12 per acre, \$1,500 cash.

**PRINCE ALBERT DISTRICT—800 ACRES,** three miles from station, in the Prince Albert district. The soil is a real black vegetable mould from 18 inches to two feet deep, on a clay subsoil, and is high land. There is abundance of hay and water, about 20 acres of timber affording excellent shelter for stock. 335 acres under cultivation, 160 acres summerfallow. The buildings are first-class, including a new barn 36 x 62. The farm is all fenced and cross fenced, is free from stone and is clean. This is one of the best stock farms in the Prince Albert district. Price \$35 per acre, quarter cash and the balance in five annual payments at seven per cent.

**MELFORT DISTRICT—450 ACRES, 230 GOOD** grain land, 230 of which is now ready for crop, 120 acres pasture and scrub, 30 excellent hay land. This is a new farm, free from weeds, only two crops being taken. Buildings are in good repair, mostly new, frame house 16 x 24, shed 12 x 16, two-story barn 18 x 24, chicken house, machine shed and ice house, and three granaries. The soil is a deep black loam free from stone. This is a well settled district, eight miles from a growing town. The heavy growth of grass in this district along with the scrub, which affords plenty of shelter, and an unfailing water supply from a 25-foot well and lake on the west side, makes an ideal place for cattle raising and mixed farming. Price \$25 per acre, \$5,000 cash.

**MELFORT DISTRICT—320 ACRES DEEP** black loam in mixed farming district. 200 acres ready for crop, 75 yet to break, 45 hay and pasture. There is a complete outfit of buildings, including house 24 x 24, shed 8 x 10, two barns 24 x 24, and one 16 x 24, two granaries, hen house and ice house, all in good repair. Plentiful supply of water from a 20-foot well and a flowing creek. This place has been well farmed, is in a prosperous well-settled district, only four miles from two good towns, south and east of Prince Albert. The price is \$42 per acre, \$4,000 cash, balance crop, or cash payments at seven per cent.

**MELFORT DISTRICT—ONE-QUARTER-SECTION** at \$10 per acre, deep black loam. Ten acres in crop last year. This place has been used for grazing, but most of the quarter could be broken. With the small lake in one corner, and the shelter afforded by the scrub and bluff, makes it a good stock or mixed farming quarter. There is a 12 x 16 house, 14 x 16 barn, 15 miles from good town, 2½ miles from post office, 1½ miles from school. \$500 cash, balance, five years at seven per cent.

**ROSETOWN DISTRICT—628 ACRES FIRST-** class wheat land, quarter mile from town in prosperous well-settled district. All fenced with Page and barb wire. The soil is chocolate loam on clay subsoil, free from stone. 480 acres under cultivation, 95 pasture, 50 hay, all of which could be broken. Abundant supply of water from flowing well. The buildings are well built and in good repair, valued at \$8,000, 1½ storey house 18 x 24, with kitchen 16 x 18, two storey barn 24 x 38, cow stable 18 x 24, shed 12 x 18, two large granaries. The complete equipment of horses and implements may be purchased. This is an up-to-date well-farmed section, a going concern, where it is possible to get immediate returns on the investment. The price of the 628 acres is \$28,000, \$10,000 would get possession of farm with horses and implements, the balance crop payments.

**CARLYLE DISTRICT—640 ACRES, SEVEN** miles from two good towns, all under cultivation, 160 acres in summerfallow. The buildings are good serviceable farm buildings in good state of repair. The soil is a black loam, 18 inches deep, on a clay subsoil. There are no stones, no alkali, and a good supply of water. This farm will be sold as a going concern including stock, implements, seed and feed, 400 bushels of seed wheat, 160 bushels seed oats, 80 bushels seed barley, 800 bushels feed oats, 100 bushels feed barley, quantity of hay and oat sheaves. The price is \$40 per acre, with \$5,000 in cash, the balance, \$1,500 and interest yearly for five years, when \$1,000 each year, with interest at seven per cent.

**SECTION AND A HALF, GOOD STATE OF** cultivation, about 80 acres prairie; very near all fenced and cross fenced with seven-strand woven fence, barb wire on top; house, storey and a half, with large lean-to kitchen; stable for 32 head of horses; cow barn, 24 x 28; sheep stable for 100 head, with high board corral; implement shed, 40 x 44; driving shed, 22 x 30; blacksmith shop; good flowing well between house and barn; school and church cornering land; six miles south-west of Quernsey, six miles south of Wolverine. For particulars, Creelman, Box 16, Route 1, Quernsey, Sask. 8-4

**WESTERN CANADA OPPORTUNITY—ONLY** meat business miles around; during harvest hundred dollars daily; shop two blocks from splendid five-room house; well-built barn, big lot; also slaughter house on two acres; half mile from town; leaseable cheap; grazing land adjoining; main line Canadian Pacific, ill health; must leave. For full sale all for \$3,000. Write Hugh McLaren, Balgonia, Sask., or W. E. Wright, 196-6th, Portland, Oregon.

**FOR SALE—WE HAVE FARM LANDS FOR** sale, cheap, in Saskatchewan. Can satisfy the smallest prospective buyer. In some instances the sum of \$200 to \$300 will cover the first year's payment. Write us for particulars, stating district desired. Will gladly supply full details. The Royal Trust Company, Bank of Montreal, Winnipeg.

**FOR SALE—2,000 ACRES PRAIRIE OR** prairie and poplar grove land, from 30 to 35 miles from Winnipeg, at low prices on terms 1-20 cash, balance in twenty yearly payments, 6 per cent. Write for particulars. The Walsh Land Co., Winnipeg, Canada. 10-3

## FARM LANDS—Continued

**200 ACRES SACRIFICED LESS THAN VALUE** of buildings, with pair horses, five cows, three heifers, two calves, poultry, complete farming and dairy implements; hay, silage, potatoes; on main road, mile creamery, etc., 2¼ miles RR town. Dark loam machine-worked fields, clay subsoil, wire-fenced pasture, valuable wood, fruit, estimated 200,000 feet timber; 12-room furnace-heated house, large basement, barn, silo, poultry, ice, carriage houses, garage, etc. All A1 condition. Agod owner sells quick buyer everything, \$6,600, easy terms. Details page three Catalog Bargains 17 states. Copy free. Strout Farm Agency, Dept 225 BG, Plymouth Bldg., Minn.

**OKANOGAN VALLEY IRRIGATED LANDS,** Washington—Mild climate; big areas under and coming under water; rich soil; alfalfa, corn; dairy and beef cattle, hogs; range; timber; water; tomatoes, melons, apples; finest fruit country in the world. Ideal place to make permanent home. J. W. Graham, Tonasket, Wash.

**IDEAL FARM HOMES IN CHILLIWACK** Valley on Fraser River, British Columbia. Mild, healthy climate; land very productive; abundance of fruit. Where farming is both pleasant and profitable. Electric cars to and from Vancouver and the Sea. Write for information. Chilliwack Land Co., J. H. Campbell, Manager.

**FOR SALE—480 ACRES, RED DEER DISTRICT,** 180 acres cultivated, 90 acres ready for seed, including 70 acres breaking; running water year round; suitable buildings; splendid farm. Will put in crop, including seed. \$30 acre. Moderate cash payment, balance over seven years. Write owner, Box 31, Everts, Alta. 11-2

**SELLING—3 HALF-SECTIONS, ONE SECTION** heavy clay loam, 1½ miles from new townsite; 290 acres summerfallow, 70 fenced, balance stubble; one-half prairie medium heavy to heavy. This half \$17 acre. Mac Aitken, Mantario, Sask. 8-4

**FOR SALE—GOOD QUARTER SECTION, 80** acres under cultivation, 50 acres summerfallow, rest good hay land; two and a half miles from Grand Trunk Station, Yarbo, Sask. For particulars, apply Rev. Stephen Soos, Esterhazy, Sask. 8-4

**FOR SALE OR RENT—THE S.W. ¼ 34 AND** east half of N.W. ¼, 27-12-2, west. Two miles west of Meadows Station, 195 acres ready for crop, 100 acres of which was sown to flax last year, the balance, 95 acres, new breaking. Share rent. A. L. Ashdown, 179 Bannatyne Ave., Winnipeg, Man. 11-4

**FOR SALE OR RENT—640 ACRES IN THE** Carman district, all under cultivation, about 225 acres ready for seed, serviceable buildings. A. L. Ashdown, 179 Bannatyne Ave., East, Phone M. 3738, Winnipeg, Man.

**SELLING—GOOD STOCK FARM, FOUR MILES** from good town; plenty of range and water; fencing, buildings; with or without 150 bred ewes; horses and machinery. H. Galloway, Major, Sask.

**SELLING—GOOD HALF-SECTION 2¼ MILES** from Waldron. 280 acres new breaking, double disced, remainder open prairie. For particulars apply J. A. M. Patrick, Yorkton, Sask. 10-3

**FOR LIST OF FARM LANDS FOR SALE IN** the Portage la Prairie and Oakville district, write S. J. Newman, Real Estate Agent, Portage la Prairie, Man. 6-7

**SELL YOUR PROPERTY QUICKLY FOR** cash, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 18, Lincoln, Nebr. 9-4

**FOR BRITISH COLUMBIA FARMS AND** chicken ranches, write to Pemberton & Son, 418 Howe St., Vancouver. Established 1887. 37-4

**DESIRABLE STOCK FARM FOR SALE. SEE** full particulars in advertisement on page 35 in this issue. N. A. Weir, Oxbow, Alta. 10-2

**WANTED—TO HEAR FROM OWNER OF** farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

## SITUATIONS

**WANTED TO ENGAGE RELIABLE EXPER-** ienced farm hand, steady for the whole season; also boy to do light work on farm. For particulars apply, Seager Wheeler, Roethorn, Sask. 11-4

LIVE POULTRY  
WANTED

## Prices

Old Hens, in good condition, per lb. 26-28c  
Ducks, per lb. 30c  
Geese, per lb. 25c  
Turkeys, per lb. 27-28c  
Old Roosters, per lb. 20c  
Young Roosters, highest market price

We are prepaying crates to any part in Manitoba and Saskatchewan. The prices quoted are for poultry in good marketable condition. Money orders mailed daily.

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43 CHARLES ST., WINNIPEG

Tested Seed Grain  
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Regina, Sask.  
Canada Western Seed Grain

## Bulk Car Lots, F.O.B. Calgary

No. 1 Seed Wheat, Marquis, per bushel \$2.28  
No. 1 Seed Barley, Six-rowed, per bus. 1.25  
No. 1 Seed Oats, Alberta orders, per bushel 1.06  
No. 2 Seed Oats, Alberta orders, per bushel 1.00

## Car Lots, One or More Kinds of Grain, Sacks included, F.O.B. Calgary.

No. 1 Seed Wheat, 2 bushels per sack, per bushel \$2.48  
No. 1 Seed Barley, 2½ bushels per sack, per bushel 1.87  
No. 1 Seed Oats, 3 bushels per sack, per bushel 1.15  
No. 2 Seed Oats, 3 bushels per sack, per bushel 1.09  
Less than car-lot shipments carry extra charges per bushel: wheat, 5 cents; barley and oats, 8 cents; to cover cartage from elevators to stations. Freight rates are also higher.

## Bulk Car Lots, F.O.B. Moose Jaw and Saskatoon.

No. 1 Seed Wheat, per bushel \$2.80  
No. 1 Seed Barley, per bushel 1.25  
No. 2 Seed Oats, per bushel 1.04

## Car Lots, Sacks included, F.O.B. Moose Jaw and Saskatoon.

No. 1 Seed Wheat, per bushel \$2.45  
No. 1 Seed Barley, per bushel 1.87  
No. 1 Seed Oats, per bushel 1.19  
No. 2 Seed Oats, per bushel 1.13

## ONTARIO OATS, No. 1 Seed, Bulk Car Lots Delivered.

All Saskatchewan points, freight paid, per bushel \$1.12  
All Manitoba points, freight paid, per bushel 1.10

## PRINCE EDWARD ISLAND OATS, Sacks included, F.O.B. Regina.

No. 1 Seed, Pure Banner, per bushel \$1.84

## Quality of Seed Offered.

The Dominion seed inspection staff inspects all grain that is purchased for seed. Only grain is accepted which can be cleaned to the Seed Grades, No. 1 and No. 2, as defined by order-in-council under the Seed Control Act. No. 1 Seed Oats are white oats, sound, strong vitality, clean and practically free from other grain, free from wild oats or other noxious weed seeds, and weigh not less than 34 pounds to the measured bushel.

No. 2 Seed Oats are the same quality as No. 1, but may contain up to ten wild oats to the pound.

The seed grain is inspected again after being cleaned, and ten representative samples from every car load shipped out, are examined for purity by the seed inspectors at the elevators and tested for germination at a Dominion Seed Laboratory. An official seed certificate is issued on each car load of seed grain sold by the commission. If purchasing seed grades of grain through another party, protect yourself by asking to see the Seed Certificate.

The average germination of our No. 1 and No. 2 Canada Western Seed Oats, is 90 per cent., and the weight per measured bushel, 45 pounds.

## Eastern Canada Oats.

No. 1 Seed Oats had to be brought from Ontario and Prince Edward Island for the districts with seed shortage in Manitoba and Saskatchewan. The seed inspectors stationed at Saskatoon, Moose Jaw and Winnipeg were unable to collect any quantity of No. 1 Seed Oats because of the prevalence of wild oats and frost injury to germination in the east districts of these provinces. Eastern Canada oats gave good results in the West when introduced for the seed shortage ten years ago. Our eastern shipments are free from wild oats, germinate over 97 per cent., and weight over 40 pounds per measured bushel.

## All Seed Sold at Cost.

The prices asked by the commission represent the average cost of the seed grain, including the premiums paid for the superior stocks which could be cleaned to the seed grades, also charges for storage, cleaning, shrinkage in cleaning, sacks and sacking where required. The services of the commission and the seed inspection staff are provided free of charge by the Dominion government.

## Order Seed Immediately.

Municipalities, farmers' organizations, groups of farmers and individuals who are depending on the commission for seed oats should send their orders at the earliest possible date, so that the necessary quantities may be obtained from Eastern Canada. The Commissioner of Indian Affairs has purchased ten car loads of Island Banner Oats for the newly-broken lands on the Indian Reserves; and the Saskatchewan government has purchased 40,000 bushels of our No. 1 Seed Oats from Ontario for distribution in the unorganized areas of the province.

## Sales on Cash Basis.

The commission is permitted to make sales on cash basis only. Bank draft is attached to bill of lading for orders to open stations. Send cash with orders for shipments to closed stations.—Advertisement.

## Gas Engine Lubrication

Continued from Page 57

ber of engines, where the mechanical force-feed lubricator is employed, is fully outlined at Fig. 23. Oil is delivered from the lubricator into the oil rings B. It is then conveyed by centrifugal force through the passages C, communicating directly with the crank-pin bearing. The piston-pin bearing is lubricated by oil-collecting groove A on top of piston (right-hand figure); holes drilled in the groove convey the oil to the bearing.

### Transmission Lubrication

The proper medium to use for tractor-transmission lubrication is generally specified in the instructions issued by the manufacturer. It is the usual practice to use a heavy oil, semi-fluid grease is used in some cases, but only to a limited extent. The particular kind of oil that is required depends to a great extent on the type of transmission, and the speed at which the different gears rotate. Steam engine cylinder oil is used in the majority of enclosed transmissions, although some tractors use a special gear oil of a different body.

In open transmissions a number of different oils may be used, gear oil, or any of the lower-grade oils prove satisfactory if they are not too thick to spread evenly on the gear teeth, or so thin that the oil will not adhere, but is thrown off the rapidly-revolving gear. In a number of tractors, the waste oil from the motor is utilized to lubricate the transmission gears, or drive chains. There is considerable difference of opinion as to the lubrication of open transmission gears. Some contend that oil is the proper medium to employ, while others prefer grease, and some claim that lubrication of any kind is detrimental, particularly in working a tractor in a light, sandy soil. Undoubtedly a light soil, which blows and adheres to the oil or grease on the gears will seriously effect the wear to the gearing. Grease is found to produce the more serious results under these conditions since it forms an adhesive paste, and when mixed with an abrasive substance, cuts the gears very rapidly. However, it does not prove that lubrication should be dispensed with entirely because an abnormal condition is encountered. As a rule, oil will give satisfactory results, although, under certain conditions, it may be found advisable to dispense with even the application of oil for the time being.

Tractor and gas engine operators have frequently been charged with indifference to the subject of proper lubrication; be that as it may, the importance of lubrication should be fully appreciated and an endeavor put forth to obtain the highest lubricating efficiency possible from both the medium used and the devices employed in its application.

### Standard Bank Annual

The Standard Bank of Canada's Forty-fourth Annual Statement shows that increased profits were earned for the year ending January 31, 1919. A comparison of the main features of the statement with that of last year shows the following increases:—

Deposits, now \$65,969,558, increase \$7,888,855.

Notes in circulation, now \$6,697,853, increase \$1,213,475.

Cash on hand and other quick assets, now \$36,066,337, increase \$3,717,562.

Total resources, now \$83,656,865, increase \$9,665,958.

Government and other securities, now \$13,852,464, increase \$1,203,080.

Commercial loans, now \$45,658,553, increase \$5,693,809.

### Lost His Head

They were at public meeting. "Friends," said Jones at the top of his voice, "do not be deceived by the promises of this man. His policy is personified in himself, for though he wears a frock coat and a silk hat, yet at the present moment he has but half a shirt to his back. The other—"

"What!" screamed the other man, as he started to remove his coat. "You insolvent scoundrel, I will first prove to the assemblage that your insinuation is an abominable lie and then I will prove it to you."

"Calm yourself," replied the other. "I was about to remark, when you interrupted me, that the other half was upon your chest."

**Any Soil,  
Any Service,  
Successfully  
met by the**



## Cockshutt Light Tractor Plow

The Cockshutt Light Tractor Plow has been a great success in every part of the country. This success is due to the fact that it is made by a firm which has specialized for a lifetime in the manufacture of high-grade plows to suit Canadian farming conditions. Also, because we have embodied in it scientific design and the highest quality materials and workmanship, which our close acquaintanceship with field conditions all over Canada have shown are necessary for a plow for this work.

A cord within easy reach of the tractor operator's hand works the automatic power lift, raising the bottoms high and level when you want them out of the ground, and lowering them again when you wish. Easily-operated levers are conveniently placed for varying the depth of work.

The hitch can be adjusted instantly to suit any make of tractor.

These Plows are built in Two and Three-Furrow sizes, and fitted with either 12-inch or 14-inch Bottoms, Stubble or Breaker styles. The Two-Furrow size can be quickly turned into a Three-Furrow by the addition of a few parts.

### "Horseless Plowing the Cockshutt Way"

Is the name of an interesting booklet that you should read if you are interested in this very important subject. Write to our nearest Branch today for a copy.

## COCKSHUTT PLOW COMPANY LIMITED

WINNIPEG REGINA SASKATOON CALGARY EDMONTON

# William Penn MOTOR OIL



A body for every make and type of motor car and tractor—

**Extra Heavy, Heavy,  
Medium, Light,  
Cold Test**

made of Pennsylvania stocks—admittedly the best in the world—to specifications determined by years of experience catering to Western Canadian needs.

Write our nearest office for chart showing which one of these oils you should use.

# Continental Oil Company LIMITED

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2

A Postage Stamp is all that separates you from the Advertiser.



## From the Great Herd of the Late G. W. BROWN, Lajord, Sask.

**GOVERNOR BUTTERFLY, 100184**—Roan, calved November 17, 1913. Bred by the University of Saskatchewan, Saskatoon, Sask. Got by Prince Butterfly, 83522. Dam, Sally 13th, 65465; Primrose Day, imp., 50072; Sally's Secret; Royal Prince, imp., 26062; Sally 5th, imp., 24301; Topman, 63447. A good Sittytion Secret pedigree.

**GOLD STAMP**—Red, calved September 2, 1917. Bred by W. C. Edwards and Co., Rockland, Ont. Got by Goldfinder, 101563. Dam, Maud 43, 84142; Prince of Fashion, imp., 36080; Maud 43, imp., a full sister to Spicy Marquis, stock bull for Sir Wm. Van Horne for a number of years.

**PRINCE CORAL**—Roan, calved December 16, 1917. Bred by W. C. Edwards and Co., Rockland, Ont. Got by Maxwellton Coral, 104274. Dam, Golden Rose, 92047; Bertie's Hero, 52673; Golden Wreath 11th, imp., by Knuckle Duster, imp., 26868, a Cruickshank Brawith Bud.

**WHITE CORAL**—White, calved January 3, 1918. Bred by W. C. Edwards and Co., Rockland, Ont. Got by Maxwellton Coral, 104274. Dam, Emma 54, 103793, by Missie Champion, 48278; Emma 45; Royal Prince, imp., 71490; Emma 37, imp., bred by W. S. Marr, Uppermill, Aberdeenshire.

**CORAL CHIEF**—Roan, calved March 13, 1918. Bred by W. C. Edwards and Co., Rockland, Ont. Got by Maxwellton Coral, 104274. Dam, Lucy of Pine Grove 10th, 100949, by Prince of Orange, 72487; Janet 2nd, imp., by Knuckle Duster, imp., 72793, a Cruickshank Bellona, bred by H. Copeland, Ellon, Aberdeenshire.

**LADY SUSIE**—Roan, calved September 6, 1917. Bred by W. C. Edwards and Co., Rockland, Ont. Got by Goldfinder, 101563. Dam, Susie, 115263; Monarch, 84145; Susanna, imp., bred by James Burnie, Westerton, Aberdeenshire.

**MAXWALTON CORAL, 104274**—Was bred by Carpenter and Ross, Mansfield, Ohio. Got by Maxwellton Renown, 91851. Dam, Coral Beauty 2nd, imp. Was selected by Mr. Edwards as the best young bull in the Maxwellton sale, and purchased at a big price to head his herd at Rockland, and is considered by him to be one of the best stock bulls he has ever used. He was a winning calf and yearling through the American show circuits.

**GOLDFINDER, 101563**—Was bred by W. C. Edwards and Co., and was their best calf of his year. He was got by Bapton Mandolin, imp., 82551. Dam, Golden Rose, 92047, a Cruickshank Brawith Bud. Got by British Hero, the winning yearling bull at the Chicago International. Goldfinder was first prize junior yearling in 1916.

## From the Herd of W. W. SHARPE, Stettler, Alta.

COLUMBIA WONDER, 114598. Roan, born March 20, 1917.

DAM

Matchless 47th, 121567  
Matchless 39th, 70109  
Matchless 33rd  
Matchless 17th  
Matchless of Elmhurst 5th  
Matchless of Kinellar 2nd  
Matchless 19th  
Matchless 16th, imp., 334

**COLUMBIA WONDER, 114598**, is one of the most promising bulls that has been offered at public auction in a good while. He is low-set, thick and smooth, has plenty of quality, and in Shorthorn type and character he is just right. He is the sort of young bull that will improve any pure-bred Shorthorn herd. He is a Cruickshank Matchless of choicest breeding. Every bull in his pedigree, as well as every dam, is straight Scotch without an outcross. His sire was first prize calf at Toronto Exhibition, and he himself is a real show proposition.

**ESCAPA CHAMPION, 95946**, a Broadbuck, son of imported Right Sort, 80067 (118046), the bull that sold to America's sale for \$5,000. His dam was also an imported cow, Broadbuck 11th, 92219, by Broadmaster (97929). Escapa a Champion was the first prize calf in 1914 at both Toronto and London exhibitions, and is one of the best breeding bulls in Canada today.

**MILDRED'S ROYAL, 45353**, a Campbell Mina bull, bred by J. and W. B. Watt, of Salem, Ontario; got by B. A. Watt, 11982. Dam, Mildred 8th, 37752, by Royal Rector, imp., 12050.

**SCOTTISH BEAU, imp., 36099**, one of the best breeding, imported bulls ever brought to Canada, bred by William Duthie, Colonsay, Aberdeenshire, Scotland, and used in the herd of J. and W. B. Watt, of Salem, Ont.

## SUNNY SLOPE SHORTHORNS

Herd Headed by the Two Great Bulls:—

**OAK BLUFF HERO**, by Imp. Oakland Star, and **WILLOW RIDGE MARQUIS**, by Imp. Gainford Marquis.

Bulls, Cows, and Heifers always for sale at most reasonable prices. Special offering at present in bulls from nine months to two years old. Pay the farm a visit. Farm ten miles south-west Calgary, on Priddis' trail. Stock shipped from Calgary, C.P.R., C.N.R., or G.T.P.

**NORMAN HARRISON** — Priddis, Alta.

## Hunter's Horses Clydesdales and Percherons

In **CLYDESDALES**, I have a few good Colts, rising two, three, and four years old, by Baron's Best, Dunure Sontar, Scotia's Pride, Dunure Ivory, and others. I have also a few head of choice young **CLYDESDALE MARES**.

In **PERCHERONS**, I am offering six two-year-old Colts, growthy, acclimated horses, which will prove highly serviceable sires. Also the ten-year-old Calgary Prize-winning Belgian Stallion, Le Capitaine, a proved foal getter. Write me for particulars. Stables in town.

**W. W. HUNTER** — OLDS, ALTA.

## SHORTHORNS AND CLYDESDALES

We are offering for sale at most reasonable prices, owing to lack of accommodation, a number of two-year-old and Yearling Bulls, big growthy fellows, several of them ready for service, sired by the well-known imported bull, Ardethan Fortune, and others, and out of dams of the leading families.

Also the good imported two-year-old bull, Royal Gift, by the Duthie-bred Gollynie Sweepstakes.

Also females from yearlings up, by Ardethan Fortune Ensign, by Silver Cloud, and out of high-quality dams. Those of breeding age have been bred to our good herd bull, Duke of Saskatoon, by Gainford Marquis.

In Clydesdales, we have for sale, Four Good Stallions, from two to four years old, by such well-known sires as Lord Ardwell, Topnotch, and others. Write us your wants.

**JAMES BOUSFIELD & SONS** — **MACGREGOR, MANITOBA.**

## Avoca Farm SHORTHORNS

**VILLAGE MARQUIS, 91643**, son of the noted Gainford Marquis (imp.) heads my herd.

My stock won leading championship prizes at Calgary Summer Fair and Calgary Winter Fair, 1918.

**FOR SALE**—Some extra choice young bulls, also a number of young cows and heifers of superior individuality and breeding. Visitation solicited, or write for prices. Farm adjoins Calgary.

**L. A. BOWES, Offices, 235 8th Ave. E., Calgary, Alta.**

## PERCHERON STALLIONS FOR SALE

We have for sale, Two Stallions, rising four years, and Six, rising two years. They are extra good individuals, thoroughly acclimated, and of right quality and breeding. Also a number of good imported Mares. Write us for particulars.

**C. H. OLSON & SON, Cando, N. Dak.**

Cando is on the G.N. Ry., Devil's Lake to Brandon, 42 miles from Boundary.

## The Canadian Hen in 1919

*Her Economic Necessity—The European Market—The Science of the Pure Breeds—By E. A. Lloyd*

**"M**EATS, fat and milk must literally be supplied in millions of tons to tide over the impoverished peoples of Europe," said Hoover, the food dictator. This is an astounding statement. Never before have the lives of so many been so dependent upon the organizing genius of one man. Will Hoover's orders be filled? It is problematical. The U.S. and Canada in 1917 and 1918 rose to greater grain and livestock production than had been deemed possible, and now only awaiting the arranging of credits multiplied production of meats is asked for.

Why was more money spent by Uncle Sam in urging more poultry in 1918 than for any other kind of livestock? Was it to grow poultry and eggs for the armies? No. It was to fill, in quick time, if necessary, the heavily-drained home food supply. If more meats and breeding animals than ever are needed in Europe, America's counsellor, Hoover, advises the people at home to raise more chickens. He advises it and the department of agriculture has appropriated still more money to advance it for some very elementary reasons:—

(1) More men and women can raise chickens than any other form of animal product. Only a matter of degree distinguishes the city dweller from the farmer in this business.

(2) Poultry and eggs with milk are the most popular animal products.

(3) The young of poultry grow faster and mature and multiply more quickly than any other animals.

(4) They consume waste feeds.

(5) Poultry production may be made to respond most easily to supply and demand with, therefore, minimum market risks during reconstruction.

(6) Eggs contain the essential vitamins in every available form.

(7) Poultry, by selection and care in breeding will respond most quickly for increased production.

If the hypothesis that Europe must have meats is clear and safe, then the solution is "More chickens in America."

### Situation in America

What have been the effects of the U.S. campaign, consisting of Federal Poultry Association and government, on the poultry situation?

(1) The consumption of poultry, meat and eggs increased, prices rose,

(2) Only the best stock has been kept and the per capita hen production has been considerably increased.

(3) The demonstration of the efficiency of the pure-breeds and selection has created an unprecedented demand for standard bred poultry.

Never has there been so much enthusiasm at shows nor such a keen demand for good breeding stock. The coming demand from Belgium, France, Roumania and other countries will add to the shortage. Improved refrigeration will also take as much frozen poultry meat and as many eggs as America can supply. The U.S. government will vote an appropriation, it is expected, of \$200,000 for poultry in 1919.



Hatch Early Chickens. They Thrive Better, Mature Earlier and Lay Earlier.

Canada has not seen such a large percentage of her poultrymen go out of business, because feeds have not been quite so scarce nor so dear here, and on the Western farm, particularly, we have more waste feed. Our less intensively developed industry has stood the strain better just because of its attachments to other things, and we stand at an advantage. Our exports to Great Britain 16 years ago were 11,000,000 dozen eggs. This last year we only exported 4,000,000 dozen eggs with record prices offered in Great Britain and practically an unlimited market. The Canadian people are consuming so many more eggs at home that we are barely taking care of the home demand.

### Improvement in Western Eggs

A few years ago Western, and Saskatchewan eggs particularly, were in bad repute in the markets of Great Britain, and for very good reasons. They were dirty, uneven, poor in shell, and often partly incubated. The gospel of better care and breeding, as spread by local educators, and the work accomplished by the Dominion poultry branch, under Mr. Brown, in inspection and grading of eggs, has raised Western eggs now almost on a par with Europe's best, viz.: Danish. The reputation of Canadian eggs has been redeemed in a market that imports 200,000,000 annually. The paralysis of European production, for a few years at least, affords us practically an unlimited market for eggs of good quality that will stand railroad and ocean voyages.

### Possibilities of Future

The average farm of Western Canada only carries about 60 hens. With cheaper feeds in sight, 100 would be a low minimum; 150 would be more reasonable. Professor Elford, of Ottawa, has adopted the slogan of 100 hens for every farm, which in 1921 would resolve into 75,000,000 head for Canada, which, at the modest production of six dozen per hen, would furnish 450,000,000 dozen eggs. If every person in Canada ate twice as many eggs then, there would be 50,000,000 dozen for export—a nice contribution by the humble hen towards paying the national debt. While egg production is the great essential, the accompanying increase in poultry meats can be taken care of. The establishing of large government cold storage warehouses at Montreal will secure and facilitate the export trade in poultry products.

### Lessons from the Past and Suggestions for the Future

Poultrymen really cannot be separated from farmers, but like them, as producers, they have until recent years been the poorest organizers in the world. The limited federated organization of the American poultrymen, even in the last year, however, has estab-



A White Wyandotte Model, Combining Beauty and Utility.

but too slowly to prevent half of the poultrymen in the States being forced out of business by the scarcity and high cost of feeds. Now there is a great live poultry shortage, as proven by the increased amount of dressed poultry in storage and big decrease in the stored supply of eggs.

lished organization as the first structure in safe development.

Improvements in quality, prices, transportation, standardization, availability of feeds in emergencies, all stand out as monuments to better building and co-operation. "It pays and is safe to advertise a good article" is coming home with telling force. We need a union of our Western forces similar to that of the California Fruit Exchange, now one of the most successful co-operative organizations in the world; selling more oranges and better oranges at higher prices than was ever contemplated. The livestock industry has been supported by the Pure-Bred Livestock Association locally and by the Western Livestock Union federally. It is time that Western poultrymen stood for something as a body. Exceeding in numbers people of any other industry they will never have strength until they get together.

#### Warnings and Maxims

It is generally recognized that boom days for the hen are looming. There will in all probability be a lot of well-meaning individuals get the chicken bug worse than ever before, and, to repeat history, lose a lot of money. When a human being gets "hen fever" he is in for an interesting time as a rule. More than ever must fundamental facts, experience, economy and the latest scientific knowledge of henology be made into ballast for the ambitious poultry novice.

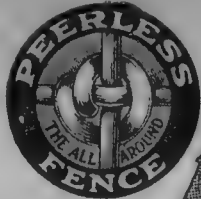
#### Importance of Utility Breeds

Many farms are carrying nondescript poultry and get nondescript results. The blamed old mongrels just kick around, and while there are some good layers among them there is no uniformity or quality in the flock. The beginner should start with pure-bred chickens of a utility breed—a breed that has been bred in sufficiently large numbers



A 200-Egg Barred Rock. Alert, Healthy and Attractive.

to allow for improvement by selection. The more common a breed is the better it is naturally, and the higher the standard the greater will be the demand for good specimens of the breed. These are economic facts which are not often appreciated. The breed should suit the purpose in view; it may be commercial egg production, but the Western farmer wants eggs (quick maturity and early eggs) and good, marketable chickens and fowl. There is no best breed; there are well-selected strains of most of the breeds of domestic fowl, but the Rhode Island Reds, Wyandottes, Plymouth Rocks and Orpingtons are the most popular and therefore most carefully selected utility breeds. Certain varieties within these breeds are again leading, and these will be taken up in a succeeding article. Poultry shows and government inspection and egg-laying contests are now making it easier for the beginner to get started right. These more popular breeds sell better, on the average yield better, and altogether pay better in the long run than others. This must not be taken as discrimination against many other splendid breeds, that in some instances, by careful selection and breeding, exceed the average of those mentioned. There is room for every breed that shows results and justifies its existence by its performance.



# PEERLESS PERFECTION



**For the Big Ranch, or the small farm, put up a fence that will last a lifetime, that serves not only as a mere boundary line, but one that gives real fence service—one that is built strong enough to withstand the onslaughts of stock as well as the ravages of all kinds of weather. Prevents drifting in winter.**

**PEERLESS Perfection** is one of the easiest fences to erect, because it stays "put." It can be erected over the most hilly and uneven ground, without buckling, snapping or kinking, or run through streams without rusting. *It's perfection.*

**Rebuild Canada** by Canadian-built Fencing. When the boys come home they will want to see the old farm well fenced. They will be pleased with the Peerless Perfection. It's the all around fence for the Dominion—made in Canada—sold in Canada—used in Canada. See the lock herein illustrated—it's sure to hold—strong and tight.

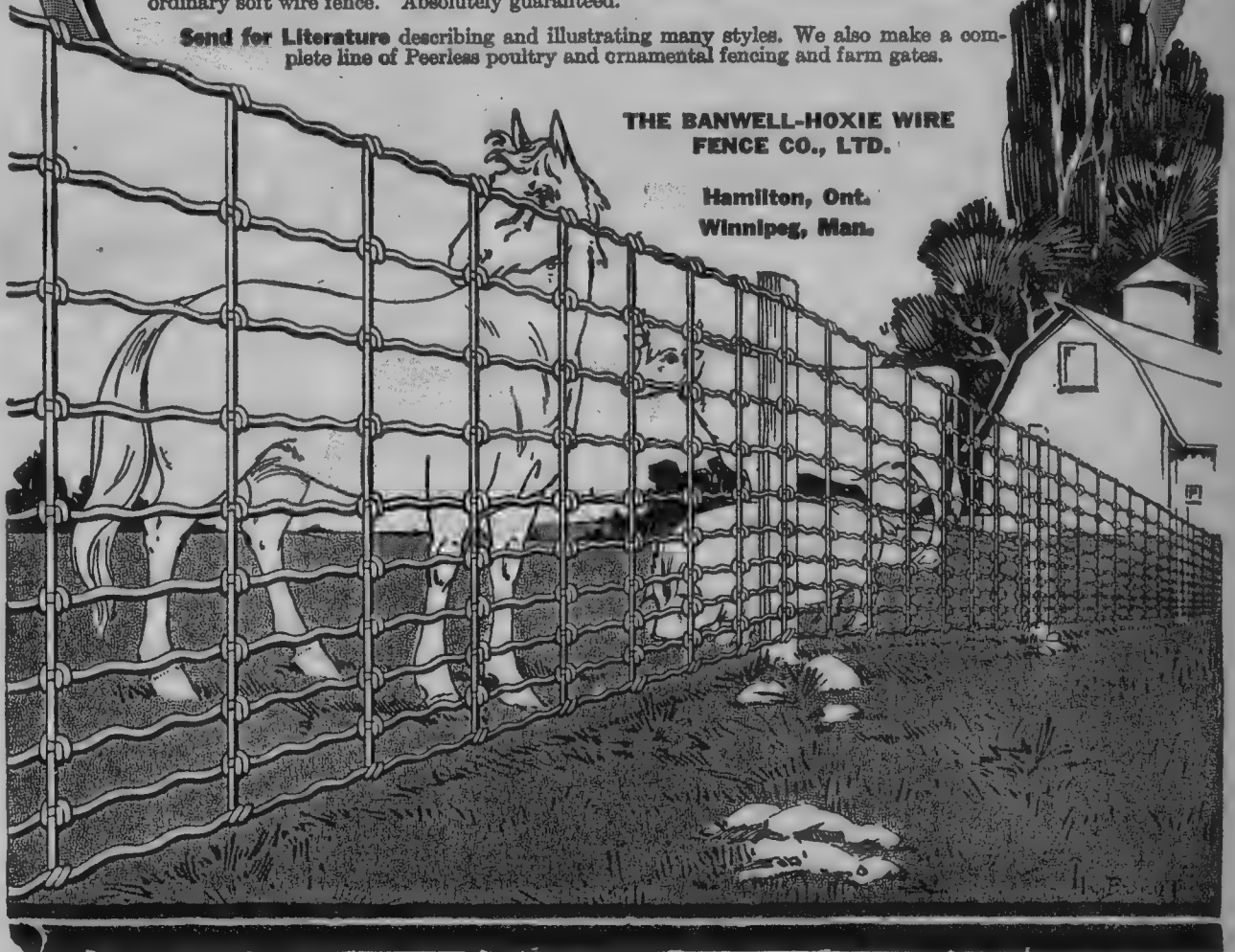
**Every Intersection is Securely Clamped with the Famous Peerless Lock.**

Animals can't break through it no matter how hard their attacks. It simply can't be broken. Just springs back in shape like a bed spring. It's made of heavy Open Hearth steel galvanized wire with all the impurities taken out and all the strength and toughness left in. Will not corrode or rust. All wires are extra heavy. Will not sag. Requires less posts than ordinary soft wire fence. Absolutely guaranteed.

**Send for Literature** describing and illustrating many styles. We also make a complete line of Peerless poultry and ornamental fencing and farm gates.

**THE BANWELL-HOXIE WIRE FENCE CO., LTD.**

Hamilton, Ont.  
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## You Cannot Afford To Neglect Your Eyes

Too much depends on good vision. Your efficiency, your ability for work, your comfort, your capacity for enjoyment, even your health itself.

If you have been "putting it off" you are only making correction more difficult and possibly adding to the cost.

Let our Mr. Nott advise you. A complete and authoritative examination (without "drops") will cost you only \$2.00 or \$3.00 and you are under no obligation to order glasses, even if you do need them. Cases requiring medical attention are always referred to the physician.

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## Markets Declining

All American Fur Markets have declined on most furs owing to mild weather and declaration of Peace. Hides have also declined one cent per pound.

We are still paying big prices for all FURS, excepting weasel, and would advise prompt shipment.

**Northwest Hide & Fur Co. Ltd.**  
278 RUPERT AVE., WINNIPEG, MAN.

## FOR SALE—Long Improved English Berkshires

Early Spring Boars and Sows, the nicest bunch of stuff I ever raised. \$30 up. Write soon and get your choice.  
**CHAS. W. WEAVER, Deloraine, Man.**

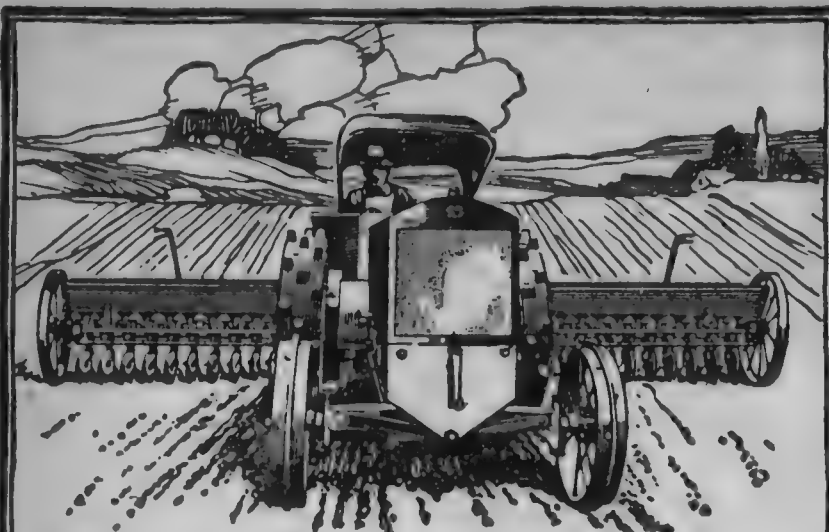
## How to Breed Live Stock

### Free Book

Get our wonderful free booklet, "How to Breed Live Stock". Reveals valuable information on the breeding and feeding of horses, cattle, swine and sheep. Shows pictures of breeding organs. Also describes our wonderful home-study course in Animal Breeding, Sterility, Disease Prevention, Contagious Abortion, Artificial Breeding, Systems of Breeding, etc.—all taught in detail. Write today for free booklet and learn how to master scientific breeding at home. We have brought the school to the breeder. Get our free booklet. Write today. Just mail a postcard.  
**NATIONAL SCHOOL OF ANIMAL BREEDING**  
Pleasant Hill, Ohio

**LOOK!**  
Estevan Red Pressed Brick, per thousand.....\$20.00  
Common Brick, per thousand.....10.00  
Lignite Coal, per ton.....2.50  
All on Cars Estevan  
**ESTEVAN COAL & BRICK CO.**  
ESTEVAN SASKATCHEWAN  
Write for Samples.





## Plant 20 Acres a Day

Hitch your seeder to a Lauson "Full Jewel" Tractor and plant 20 acres a day, every day until your crop is in. Rides easily over fresh plowed soil without packing it because the weight is evenly distributed.

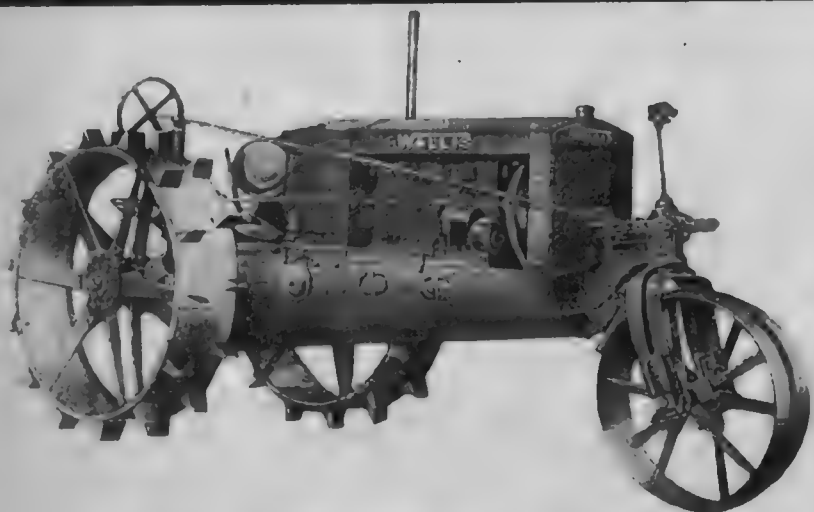
With the Lauson you can plant better, faster and at lower cost than you can do it in any other way. It speeds up farm production all along the line, being the ideal farm power unit for work either at the draw bar or belt pulley.

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BEST PROOF—ALL GEARS ENCLOSED

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## Wheat Prices to Fall

*Prospects Point to a Surplus and Sharp Decline in Market this Year*  
(Second Letter from Norman Lambert, Secretary Canadian Council of Agriculture)

PARIS, February 12.—What will the price of wheat in Canada amount to next autumn when the new crop is harvested? Paris, amid all the international bickerings of the Peace Conference, may seem to be a strange ground from which to consider such a question, but the price of Canadian wheat for the next crop year is very closely connected with developments which are taking place here. In a general way, the answer to this question depends very largely upon the ability of the Peace Conference to bring the war to a speedy end, and secure at least the beginning of a period of law and order in Europe. Because such a condition is not entirely assured, the Peace Conference has just created a new body called the Supreme Economic Council, which is to have the job of supplying not only the allied countries in Europe with food, but also the enemy countries with food and all kinds of raw materials and manufactured products. This involves for the Supreme Economic Council absolute control of shipping and financial facilities. The period of such control has been fixed for the time being to cover the armistice, and if Europe is in a helpless condition after the peace is declared, control may be continued indefinitely.

This new Supreme Economic Council has swallowed completely the Committee of Supply and Relief which was appointed at the beginning of the Peace Conference with Mr. Hoover, as Director-general, who now is a member of the new body. Sir John Beale, who has been so prominent in England as the head of the Wheat Commission and the Inter-Allied Food Council, all through the war, is the principal representative on the Economic Council from Great Britain. But as these words are being written there is considerable doubt about Sir John Beale's continued connection with the recently created organization. Sir John, who is a lawyer and a business man, and not a civil servant, has very clear and fixed views about handling the present difficult international situation as it relates to trade. He believes in lifting the blockade on the Mediterranean and on the North Atlantic as soon as possible, and leaving to private business enterprise in such supplying countries as Great Britain, Canada and the United States and Argentina, the work of adjusting trade from a war to a peace level. He wants de-control, and would use the Supreme Economic Council to bring that condition into effect at the earliest possible moment, so far as the allied and neutral countries are concerned. In this view, Sir John Beale is supported by a very large proportion of the commercial interests in the United Kingdom, including the entire grain trade and shipping industry.

The Canadian Trade Mission is also exerting every influence in its power to have these rigid lines of war control lifted from Britain as well as from Greece, Roumania, Serbia, France and Belgium, in which countries a large amount of business is awaiting Canada, and can be satisfactorily transacted immediately the ban is lifted. If Sir John Beale remains a member of this new Economic Council, the conclusion may logically be drawn that de-control in connection with a large portion of European trade will come very quickly. If he resigns, it may come very quickly also, because the pressure of business interests from all sides is becoming so persistent that the whole system of allied war-time trade control may be smashed at any moment. In fact the Ministry of Shipping already has begun to release ships, and at the present time a rather serious shortage in tonnage confronts the Economic Council in its work of giving relief.

The work of the Economic Council, therefore, if it survives the declaration of peace, will be narrowed down to the control of supplies going direct to Germany, Hungary, Turkey and Finland, and possibly Russia. It is now known, however, that when the second armistice is advanced to Germany that the Allies will demand the immediate demobilization of the German army, and as a

return for such action on Germany's part, it is proposed to lift the blockade on the North Atlantic, permitting that country to receive direct, at least, certain necessary imports, such as food. If this arrangement goes through, the Economic Council will disappear very shortly, and private business will take its place. It will mean also that food will have been the chief political instrument in settling the war.

### Germany Gets Bacon

So long as the armistice lasts, the Economic Council will exercise control over food and other supplies entering Germany, which, from all reports, certainly needs many of the necessities of life as soon as they can be supplied. The Economic Council has decided, however, that any stores of food or other materials entering Germany now must be paid for in cash, or its equivalent. The same rule applies to the other enemy countries. As a matter of fact trade has already commenced with Germany on that basis, and it has commenced as the result of a need which is almost as urgent from the Allied point of view as from that of Germany. At the very moment last week when the Supreme Economic Council was being formed in Paris, a representative of the Allies was meeting the Germans in Spa, and arranging for the shipment into Germany of 30,000 tons of bacon, to be followed by another 30,000 tons as soon as finances and shipping can be arranged. Germany is paying for this stuff partly in gold, partly in a big consignment of potash, and partly in the freight earnings which she can make on ships in her possession. Because of intense feeling in France and Belgium regarding the utilization of German resources for the re-building of the devastated areas in these countries, the gold received from Germany on this sale of bacon will be turned over to French and Belgian account. The interesting economic feature of this deal, however, is that, through it, a very serious situation with regard to an excessive supply of pork products in the United Kingdom, United States and Canada, has been relieved.

On February 1, in the United Kingdom, there was piled up 120,000 tons of bacon, or four months' supply, in Canada, 13,000 tons were being held for shipment; while in United States, which also has an undertaking with Great Britain to take supplies of bacon until the end of April, about 100,000 tons were on hand. It was a physical and a financial impossibility for the United Kingdom to receive these supplies from North America. It became, therefore, a case of throwing food away to maintain market values, and thereby fomenting political unrest, dumping these accumulated stocks before the people and telling them to eat them at any price, which would have meant bankruptcy to many private interests and losses to the producers of hogs, or finding an outlet for these stocks in Europe where the need for all kinds of fats and meats is extremely acute. The outlet has been found in Germany, and unless active warfare breaks out again Germany will get the bacon and eat it, and incidentally do a considerable service to Britain, Canada and the United States.

But, to get back to wheat. The reference to bacon and the work of the Economic Council is simply to show the complications affecting international trade at the present time. When Dr. Magill and George Fisher, of the Winnipeg Grain Exchange, and J. A. Maharg, M.P., of Saskatchewan, were in London, they met the Royal Wheat Commission, which is part of the machinery of the old Inter-Allied Food Council, and endeavored to get some assurance about the conditions which would obtain in connection with next year's crop, and whether or not, the balance of the past season's crop would be absorbed over here before the end of August, 1919. They went home ten days ago without getting much satisfaction, but since that time the assurance has been given from the office of the Wheat Commission that Canada's balance of wheat, on hand at the end of March, to which

date engagements to purchase have already been made, will be taken. Sir John Beale met the Canadian Ministers in Paris, and discussed the whole question of control with them. His assurance was that Canada's wheat would be taken, and that so far as next year's crop was concerned, it would be free to find a market any place in Europe without interference from the machinery of government control. The question to be answered, or rather estimated, therefore, is: what will be the extent of the world's supply and the world's demand next September?

Briefly, the answer generally expressed is that if the open importing countries are limited to those in Europe outside of Germany, Russia, Finland, Hungary and Turkey, there will be more wheat than will be needed, provided, of course, that no widespread climatic devastation intervenes. On the other hand, if, as a result of negotiations for peace now being carried on here, Central Europe is thrown open, and, more important still, Russia is released from the tyranny of the Bolsheviks, the world will not have nearly enough wheat to go around. It is quite likely that peace will have been established before July, and a certain modus vivendi evolved in the relations between the present Allies and Central Europe, but Russia is a closed book to everybody. And Russia looms up behind all the plans and devices of this Peace Conference like an ominous thundercloud, black and threatening. Russia now is the great, seething cauldron from which poisonous vapors still pour out over Europe and render diplomatic operations in Paris so uncertain.

#### Surplus In Sight

The estimated requirements of cereals now before the Economic Council to supply all Europe, excluding Russia, between now and August 31, are placed at 17,577,000 metric tons, or roughly, 650,000,000 bushels. According to the available world surpluses for export to the allied, neutral and enemy countries of Europe, it is estimated that there is about 17,000,000 tons of wheat and flour. Including maize, barley, rye, rice, pulse and oats, that amount is greatly increased, so that in the ordinary course of events, a considerable world-surplus of raw cereals will have to be carried over into next year.

The opinion of the authorities in the office of the Royal Wheat Commission, in London, is that the world will have more wheat than it can possibly use next year. This view has been supported strongly by Sir James Wilson, of Edinburgh, formerly of the International Institute at Rome, who has just had his report on the World's Wheat Supply made public. He estimates that in August next, the exporting countries of the world will have on hand some 8,500,000 tons of old wheat still available for export—enough to meet the normal demand of all the importing countries in the world for six months, and a much larger carry-over of exportable surplus than the world ever possessed on the corresponding date in time of peace. Sir James Wilson says further: "The price of wheat in Britain must soon be allowed to fall to the level established by the law of supply and demand, and it may, therefore, soon, perhaps by June, fall to 60 shillings a quarter (\$1.80 per bushel). By September, English wheat may be selling at 40 shillings a quarter (\$1.25 per bushel)." The British government, of course, has guaranteed the price of wheat to the farmers of the United Kingdom at 78 shillings per quarter, and if the price of her big amount of imported wheat can be reduced to 40 shillings the saving to the British government on its nine-penny loaf arrangement will be very great.

#### Outlook Not Promising

Wheat at \$1.25 per bushel in the United Kingdom does not look very promising for Canada, and less so for the United States which has fixed its price for 1919 and 1920 at \$2.26 per bushel. However, there it is. Opinion amongst the trade in London, and also amongst Americans at the Hotel Crillon here, to whom I have talked on this question, is that the government of the United States will simply have to face the loss involved in the difference between \$2.26 per bushel at Minneapolis and whatever the open, or partly open,

Continued on Page 101



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Paint and Varnish  
Manufacture

Continued from Page 48

## Necessity for the Protection of Property

The time has gone by when the use of paint and varnish is looked upon only as a luxury. At present, more than ever, it is a necessity, and although a lot of educational work has been done to show people the advantage of using paint and varnish for the preservation and beautification of their property, their consumption in Canada is not nearly so large as it should be. The present high cost of lumber and all other building materials makes it imperative that they should be protected from the ravages of the weather, and the wise man sees that a liberal use of paint and varnish is really an insurance quite as necessary and much less costly than the ordinary forms of insurance that are used.

## Export Trade in Paint and Varnish

For the last 25 years Canadian manufacturers have been developing an export trade in paint and varnish. The countries first exploited were Newfoundland and the West Indies, and a considerable business has now been worked up in these places. Since the war the possibilities of export trade have been much larger, and today Canadian paint and varnish is used to a greater or less extent in the following countries: South Africa, Australia and New Zealand, Argentine Republic, Brazil, Mexico, Newfoundland, British West Indies, Cuba, Demerara, and some of the other South American countries.

Now that the war is over it is to be hoped that this export trade will be maintained and increased. It would certainly seem fitting that Canadian paint and varnish, made from Canadian raw materials by Canadian workmen, should be used to a considerable extent in the reconstruction work that will soon be undertaken in France and Belgium.

## G.T.P. in Receiver's Hands

Ottawa, March 9.—Hon. J. D. Reid, minister of railways, has been appointed receiver of the Grand Trunk Railway system. The appointment follows an official notification which Sir Thomas White received on Thursday from the vice-president of the Grand Trunk Pacific, a notification that in view of the fact that the increased rates applicable to the Grand Trunk Pacific Railway have not been sufficient to meet the increased operating expenses, it would not be possible for the company, owing to lack of funds, to continue its operations beyond March 10.

In view of this notification, it became necessary that the government should, in the public interest, immediately take steps to ensure the continued operation of the system.

## War Measures Act Invoked

Under existing legislation, this could not be accomplished by an application to the courts for the appointment of a receiver. The War Measures Act, however, was found to provide adequate authority for action by the government, and consequently an order-in-council was passed, appointing the minister of railways receiver of the Grand Trunk Pacific Railway system, which includes the branch lines, telegraph, steamship, hotel and development and other companies.

W. P. Hinton, general manager of the Grand Trunk Pacific Railway system has agreed to conform to the requirements of the order and to facilitate the carrying out of the powers and duties required of the minister as receiver. The immediate object of the order, viz., to prevent interruption in the operation and management of the system—has, therefore, been already attained.

An important feature of the order-in-council is that which preserves to the government any other and ultimate remedies which it possesses under the provisions of trust mortgages securing issues which it has guaranteed or otherwise as creditors of the system. Similarly, the rights and remedies of other parties are not interfered with by the order. Legislation will be at once introduced for the purpose of obtaining the sanction of parliament, to what has been done.

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Immediately on receipt of an enquiry, we forward you a large envelope, full of beautifully-illustrated folders and booklets, giving all possible information regarding the 90 different styles of pianos we have for your consideration. In the quiet of your own home you may look these over, ascertain from the minute descriptions and illustrations just which one suits you best. We will ship any piano to you on receipt of a cash payment as small as \$50, the balance you may pay off in monthly, quarterly, half-yearly or fall payments, whichever suits you best.

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Doherty .....	375
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## The Sugar Business of Canada

Continued from Page 44

rations. Just how long this condition will last it is difficult to say. It will be some years before the European centres of production are again up to normal, and there is always the possibility that Germany will lose a material part of her export trade through prejudice against goods of German origin. With this the case the world's demand would continue to fall heavily on Cuba. That country has a way of rising to the emergency however, and for some years past has been systematically increasing its production to meet the demands upon it. This year's estimates are for an out-turn of 3,600,000 tons, nearly 200,000 tons more than last year's record yield. It is true that this production is fostered by substantial prices for cane, the International Sugar Commission having guaranteed a price for the crop at a figure materially over that of last year. This set price too, automatically sets the figure for other markets, and necessarily means high sugar prices for the coming season's crop, or practically till next December, and, as a consequence, will be a factor in curtailing consumption.

Still, despite these facts, there is every reason to expect improved conditions over those existing in the years just past. The submarine sinkings of last fall represented an item of many thousands of tons of total loss. The improving freight conditions, will permit the moving of last year's crop of Java sugars that is practically untouched, and the forthcoming crop of 1,250,000 tons, and many other smaller sources can be tapped, now that the crying need for tonnage for war purposes has been relieved. The indications are therefore that the coming year will be one of expansion in the sugar trade, and expansion on a satisfactory basis of profit.

## The Canadian Chemical Trade

Continued from Page 46

to be borne in mind that its chief source is animal or vegetable fats, and if a good price can be obtained for Glycerine, then the soap makers can afford to pay better prices to the farmer for fat-yielding animals. The production of soap in Canada has of late years assumed very large proportions, and it is a matter of satisfaction to know that Canada is now able to produce not only the ordinary grades of soap, but also to produce in various factories the higher grades of toilet soaps, which will compare favorably with those made in any other country.

### Products of Calcium Carbide

At Shawinigan, in Quebec, for many years Calcium Carbide has been manufactured for the production of Acetylene Gas, which is found so useful and advantageous for the production of small lighting units. To show the importance of this industry, it may be stated that the production of Calcium Carbide is approximately 80,000 to 90,000 tons per annum. Since the war started, the Canadian Electro Products Co., of Shawinigan, has effected some wonderful developments by electro chemical methods, the production of Glacial Acetic Acid, Acetone and Paraffin from Calcium Carbide—a combination of Lime and Carbon. The Acetic Acid has been required by the British government in the production of the "dope" for the coating of aeroplane wings, and the achievement of the Shawinigan Company has been a very valuable contribution to the war. The Acetone produced by the Shawinigan Company has been used in the production of the explosive Cordite, but Canada's chief contribution in the production of Acetone has been by the Weismann fermentation process, by which the Acetone has been produced directly from Corn, in the Gooderham Distilleries in Toronto.

Judging from the history of the past few years, there is every indication of a steady development of the heavy chemical trade in the Dominion of Canada, due not only to the natural resources of the country, but also to the initiative and energy of its technical chemists.

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To the 50 Mail Order Customers from whom we receive the largest total amounts of money up to and including May 31st, 1919, we will give \$5,000 worth of Victory Bonds, divided into 50 prizes. You may send in your orders for any amount and at any time, but the total amount in cash of all your orders which you send us during that period is what counts. In addition to face value of Victory Bonds all prize winners will get the interest at 5 1/2 per cent., which is due on June 1st, 1919.

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Mr. W. J. Healy.....Associate Editor, The Grain Growers' Guide  
Mr. J. T. Mitchell.....Western Home Monthly

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The winners of the prizes will be immediately notified by letter, and their prize of Victory Bond or Bonds forwarded. The names of all winners and amounts of prizes will be printed in the papers.

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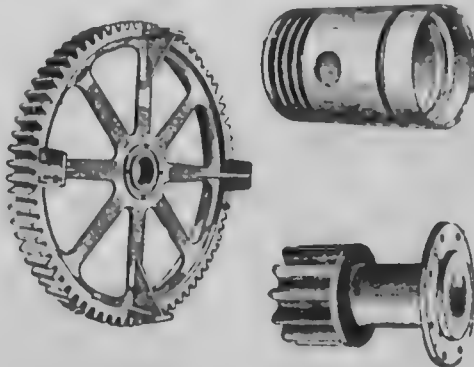
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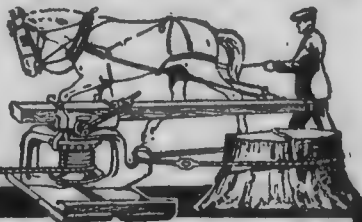
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(83)

## Clay Products and Cement

Continued from Page 42

### Statistics of Clay Products from Provincial Reports

ONTARIO—	Quantity		Value	
	1916	1917	1916	1917
Brick, fancy and pressed	31,742,000	35,203,000	\$ 318,942	\$ 462,357
Brick, common	60,441,000	74,120,000	509,559	769,340
Tile, drain	15,931,000	13,421,000	275,471	468,886
Tile, hollow blocks	4,451,000	3,931,000	176,953	301,528
Cement, Portland (barrels)	2,143,949	2,063,231	2,242,433	2,934,271
Pottery			87,025	94,501
Sewer pipe			216,749	205,810

QUEBEC—	No. of Workmen		Wages	
	1916	1917	1916	1917
Brick	553	530	\$334,360	\$334,360
Cement	530	530	536,348 (bbls.)	536,348 (bbls.)
Tile, drain and sewer pipe	146	146	75,486	75,486

NOVA SCOTIA—	Quantity		Value	
	1916	1917	1916	1917
Brick	19,504,987	13,598,075		
Drain Tile	1,355,297	959,933		
Sewer pipe	76,470			
Cement block	15,000	25,000		

BRITISH COLUMBIA—	Quantity		Value	
	1916	1917	1916	1917
Cement			436,459	487,829
Pottery				81,728
Fire, face and red brick				190,849

#### \*Production of Brick by Provinces

Nova Scotia.—The total sales in Nova Scotia in 1916 were 8,108,000 brick, valued at \$63,548. The chief sources of production were Pugwash, Elmsdale, Now Glasgow, Wallace Bridge and Plymouth.

New Brunswick.—The total sales in New Brunswick were 4,140,074 brick, valued at \$42,781. The principal points of production were Fredericton, St. John, Lewisville, St. Leonard, Bathurst and Grafton.

Quebec.—The total sales in Quebec were 97,410,490 brick, valued at \$723,178, comprising 93,668,357 common brick, valued at \$658,909, and 3,742,133 pressed brick, worth \$64,269. While brick-making is carried on in many parts of the province the principal plants are located at Montreal, La Prairie, Sherbrooke, Montmorency Falls, Quebec and Deschambault.

Ontario.—The total sales reported by 205 firms in 1916 were 141,135,685 brick, valued at \$1,196,315, including 103,854,020 common brick, valued at \$817,321, and 37,281,665 pressed brick, valued at \$378,994. The greater part was made in the counties of York, Wentworth, Peel and Halton. In addition to the brick there was produced ornamental brick, valued at \$17,

102 and fire-proofing, valued at \$218,345.

Manitoba.—In Manitoba the total sales were 9,021,744, valued at \$93,448. The principal brick-making plants are at Winnipeg, St. Boniface, Lac du Bonnet, Portage la Prairie, Sidney, Balmoral, Learys and Neepawa.

Saskatchewan.—The total sales of clay-building brick in Saskatchewan were 7,181,145, valued at \$65,376. The principal plants operated were Estevan, Shand, Prince Albert, Arcola, Meota, Clay Bank, Pilot Butte, Verigin and Broadview.

Alberta.—The total sales of clay-building brick in 1916 were 10,148,211, valued at \$98,782. In addition to ordinary building-brick, there was a production of fire-proofing brick, valued at \$53,334, as compared with \$30,263, in 1915. The principal centres of production were: Edmonton, Medicine Hat, Redcliff, Lethbridge and Sandstone.

British Columbia.—The total sales of brick in British Columbia were reported as 4,836,415, valued at \$41,771. There was also a production of fire-proofing brick, valued at \$6,839. The principal centres of brick manufacture were: Grand Forks, Clayburn, Kilgord, Port Haney and vicinity, Victoria, Sydney and East Wellington.

\*Extracted from Dominion Reports.

## The World's Depleted Food Stocks

Continued from Page 35

market in the Central Empires, has had a distinctly bullish influence on the coffee market.

#### Canada's Heavy Food Importations

Geographically situated as Canada is, she must import many of her food products from abroad. The staples are here it is true. In grain and livestock and fish, Canada is bountifully supplied, but in the many other items of the food list Canada must be an importer. Therefore, it is that in company with many other countries the Canadian trade has faced the thousand-and-one difficulties that have arisen out of the enormous demands made upon the world's shipping. Spices, for instance, come from Africa, the East and West Indies, and parts of Asia, places off the beaten tracks of travel. The difficulties of obtaining supplies has been beyond belief, and freight charges, when such freight space has been available, have been costly. Currants from Greece and Australia, raisins and olives and olive oil from Spain, lemons and olive oil from Italy, dates from Arabia and Mesopotamia, rice and beans from China, Japan and India, all these involved demands on the shipping so urgently needed to feed the millions of men in the trenches of France and Belgium, and the people at home. The great banana-importing companies have had their finest ships requisitioned by the United States government, so that millions of stems are rotting on the plantations of South and Central America every month for want of ships to move them.

#### Improved Conditions Deferred

Of course the general impression is that, now the war is over, these conditions will change. They have, unquestionably, improved somewhat, freights are slightly easier, and the heavy item of war risk insurance is a thing of the past. It will be many a long month, however, before conditions can in any way reflect the conditions as they existed four years ago. Ships must be

available to move the millions of men still at the front, and to feed them until they are moved. Ships will be required to bear the materials for rehabilitating the devastated sections of Europe, ships will be necessary to feed the starving peoples of Europe, and ships too, are scarce. The feverish building has only served to keep a little better than abreast of the losses, and ships have been working at their maximum capacity for years, not stopping for repairs, because time was too valuable to waste and facilities for repairs were limited. There is not much more shipping available than was required in other days to handle the normal orderly movement of supplies from production point to market, and these ships have to bear the added burdens of re-settling the world and re-establishing reserves.

Even where ships are not in the question the conditions are little different. Take the matter of oranges from California. Many people see no reason for their marked advance in price. But the orange grower has to pay the same premium to labor as have other producers, he has to pay the same premium for boxes and wrappers. He has to face a 25 per cent. increase in freight rate, an adverse exchange rate varying anywhere from one to three per cent., and a war tax of seven-and-a-half per cent. These are conditions that may change, that will change ultimately beyond a doubt, but not immediately, and never again to the basis of years ago.

The matter of boxes and wrappers has been mentioned. Here is another factor that has played a large part in settling the position of food prices, in the days that are past, and for many long months to come. For one reason and another paper has increased in price, therefore every food product that goes in a cardboard carton and bears a lithographed label has increased in

Continued on Page 72

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NOTE—These are an extra choice bunch of Stock and well worthy of anyone's attention. If you want good horses, or choice dairy cattle, be with us on the 19th.

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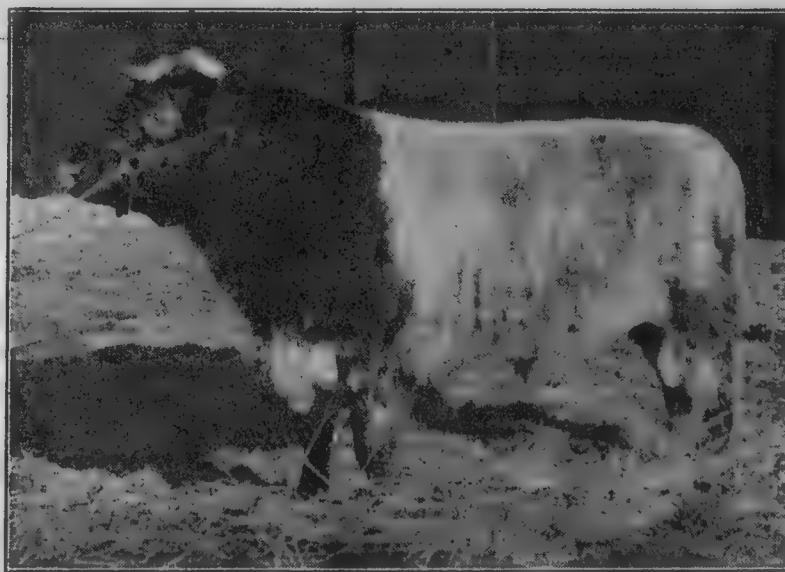
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## DISPERSION SALE

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12 Miles South of Prince Albert, Sask.

Wednesday and Thursday  
March 19th and 20th



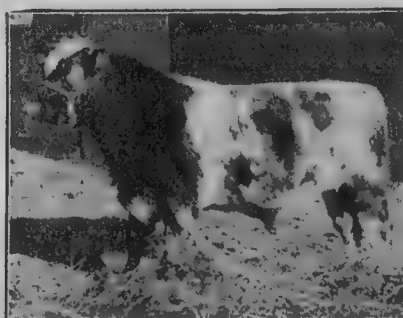
960 acres of Land and 56 head of registered Shorthorns

will be sold on First Day, Wednesday, March 19th;

Horses, Harness, Farm Machinery, Etc., Etc.

on Second day,

Thursday, March 20th



The Above Cuts are of Marr's Avon 2nd, and four of the 12 Senior Calves. These snags were taken by an amateur and do not do them justice.

All, or any part of the 960 acres of farm land can be bought by private treaty previous to sale, but if not sold will be offered at auction on the first day of the sale.

Lunch will be provided at noon.

For Further Particulars, Wire or Write:

**M. R. COWELL, Prince Albert, Sask.**

Special arrangements have been made with G.T.P. Ry. for train leaving Prince Albert, at 7.45 a.m., to stop and let passengers off at the farm each day of sale, and will take on passengers returning, at 6 p.m.

J. A. STIRLING, Auctioneer  
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The question of whether to pickle by "sprinkling" or "immersion" is answered by the Government tables given below. They offer

the best argument we know of, in proof of the better results secured by the "immersion" method.

The proper way to give your seed complete immersion-pickling is by using the

## "E. Z." GRAIN PICKLER

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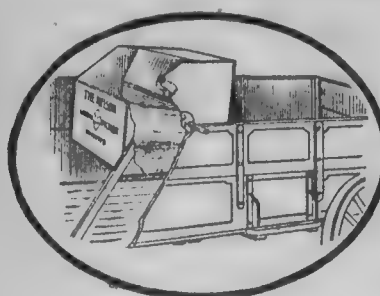


Fig. 1

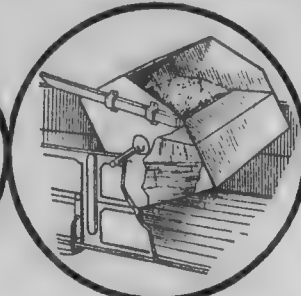


Fig. 2

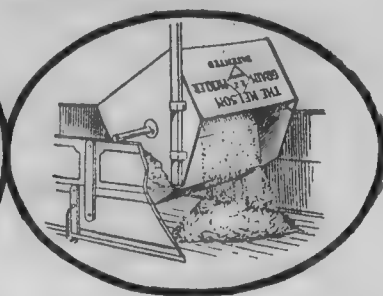


Fig. 3

The "E. Z." Grain Pickler may be used on a wagon box, as shown in the illustration, or on a stand in your granary.

Simply put solution into the "E. Z." Pickler as shown in Fig. 1, shovel grain into the pickler always making sure that there is sufficient

pickler to completely immerse your seed. Next give the Pickler a quarter turn, letting the grain drain a few seconds as shown in Fig. 2. Then dump the grain, as shown in Fig. 3. Repeat the above for each operation. By this method one man can easily pickle 100 bushels per hour.

Results of Experiments to Kill the Stinking Smut of Wheat—Percentage of Smut

Materials	1st year test	2nd year test	3rd year test	4th year test	5th year test	Average 5 years	Average yield of grain per acre 5 yrs. bush.
1—Untreated	3.0	9.3	8	6.6	3	38.0	
2—Hot Water	0	0	0	0	0	40.6	
3—Bluestone—12 hrs.	0	0	0	0	0	40.2	
4—Bluestone—sprinkled	0	0	0	0	1	41.1	
5—Formalin—immersed	0	0	0	0	0	43.3	
6—Formalin—sprinkled	0	0	0	0	0	36.3	

Increased yield and quality on five acres will pay for an "E. Z." Pickler

The "E. Z." Grain Pickler is made in Western Canada by a Western Company. We positively guarantee this Pickler to give satisfaction, or money will be refunded. Order your "E. Z." Pickler early and make sure that your expensive grain is treated by the safest possible method for the 1919 crop.

Results of Experiments to Kill the Loose Smuts of Oats—Percentage of Smut (Table compiled by Ontario Agricultural College, Guelph, Ont.)

Materials	1st year test	2nd year test	3rd year test	4th year test	5th year test	Average 5 years	Average yield of grain per acre 5 yrs. bush.
1—Untreated	5.5	3.9	11.6	4.3	8.4	67.3	
2—Hot water	0	0	0	0	0	63.7	
3—Bluestone, 5 mins.	1.1	0	0	0	1	63.5	
4—Bluestone—12 hrs.	0	0	0	0	1	66.0	
5—Bluestone—sprinkled	2.0	1.4	1.4	1.6	1.3	61.3	
6—Potassium Sulphide	3.4	1	3.1	1.5	7	66.3	
7—Formalin—immersed	0	0	0	0	0	63.3	
8—Formalin—sprinkled	0	1	0	0	0	61.3	

Note additional yield and quality where seed is immersed

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Made to Separate Wild Oats from Barley and Tame Oats and DOES IT!

## Automobile Manufacturing

Continued from Page 38

Company of Canada, Ltd., of Ford, Ont., a branch of the Ford Company of the United States.

### Assuming An Important Place

However, the automobile industry, notwithstanding the fact that it is dependent largely on the United States for parts, has attained to an important position among our Canadian industries, when one considers that it is one of the youngest of those industries. In point of capital investment, the automotive industry ranks twenty-fourth, and in point of value of output, twelfth among Canadian industries. That it will advance rapidly from now on and outstrip many other Canadian industries in relative importance, it is safe to prophesy. The writer has just been informed that the General Motors Corporation of Canada has purchased 13 acres of ground at Walkerville, Ont. There, in the near future, the erection of a big motor-manufacturing plant will be begun, and that plant, when completed, will be devoted to the manufacture of engines for McLaughlin and Chevrolet cars. As soon as operation of this new establishment is begun we shall have another all-Canadian car. There have been many enquiries recently from United States manufacturers who are anxious to establish assembling plants in Canada, from which they will care for all export business within the British Empire, and so soon as conditions are readjusted following the conclusion of peace, several newcomers may be expected. The Clyde Cars Co. of Canada, Ltd., recently began assembling trucks at its Canadian plant in Toronto, and has a capacity for 300 trucks per annum.

Following are the names and locations of Canadian automobile factories: Ford Motor Company of Canada, Ltd., Ford, Ont.; Willys-Overland, Ltd., Toronto, Ont.; McLaughlin Motor Car Co., Ltd., Oshawa, Ont.; Chevrolet Motor Co. of Canada, Ltd., Oshawa, Ont.; Canadian Briscoe Motor Co., Ltd., Walkerville, Ont.; Chalmers Motor Co., Ltd., Windsor, Ont.; Reo Motor Car Co. of Canada, Ltd., St. Catharines, Ont.; and the Canadian Crow Motor Car Co., Mount Brydges, Ont. Trucks are made by a number of the above companies and in addition by the National Steel Car Co., of Hamilton and the Menard Truck Co., of Windsor, Ont.

A good prosperity barometer for the automobile business in the Dominion is the report of motor registrations for the year as compiled annually by Motor Magazine. Total registrations for 1918 were 269,753 cars. In 1916 there were 120,318 cars, and in 1913, 50,489. Ontario leads the other provinces as an automobile owning province.

## Making Rubber Goods

Continued from Page 40

15,000 people in the various factories, offices and distributing points, with an annual pay-roll of approximately \$18,000,000. Thus it will be seen that it is one of the largest manufacturing propositions in the Dominion of Canada.

When you also consider that the raw materials which are used in the manufacture of rubber goods are the finished product of other manufacturers, with the sole exception of the rubber itself, it can readily be understood the enormous importance that this industry bears on other lines of industry in our country. Enormous quantities of cottons, sheetings, drills and ducks are used in the manufacture of rubber goods. A great many other fabrics also are used, the greater portion of which the rubber manufacturers are dependent upon Canadian manufacturers to furnish them. It will thus be seen how all-important this industry should be to the national life of the country, from its direct and indirect employment of labor and distribution of wages to thousands of employees who are thus dependent on the conduct of an industry run on so large a scale.

Some of the companies are exporting goods, and reports are such that can only be flattering to the manufacturers of Canadian-made rubber goods. Foreign countries are asking for Canadian-made goods, believing that they are honestly and truly manufactured and are desirable for the particular countries to which they are exported.

## Shipbuilding and Shipping

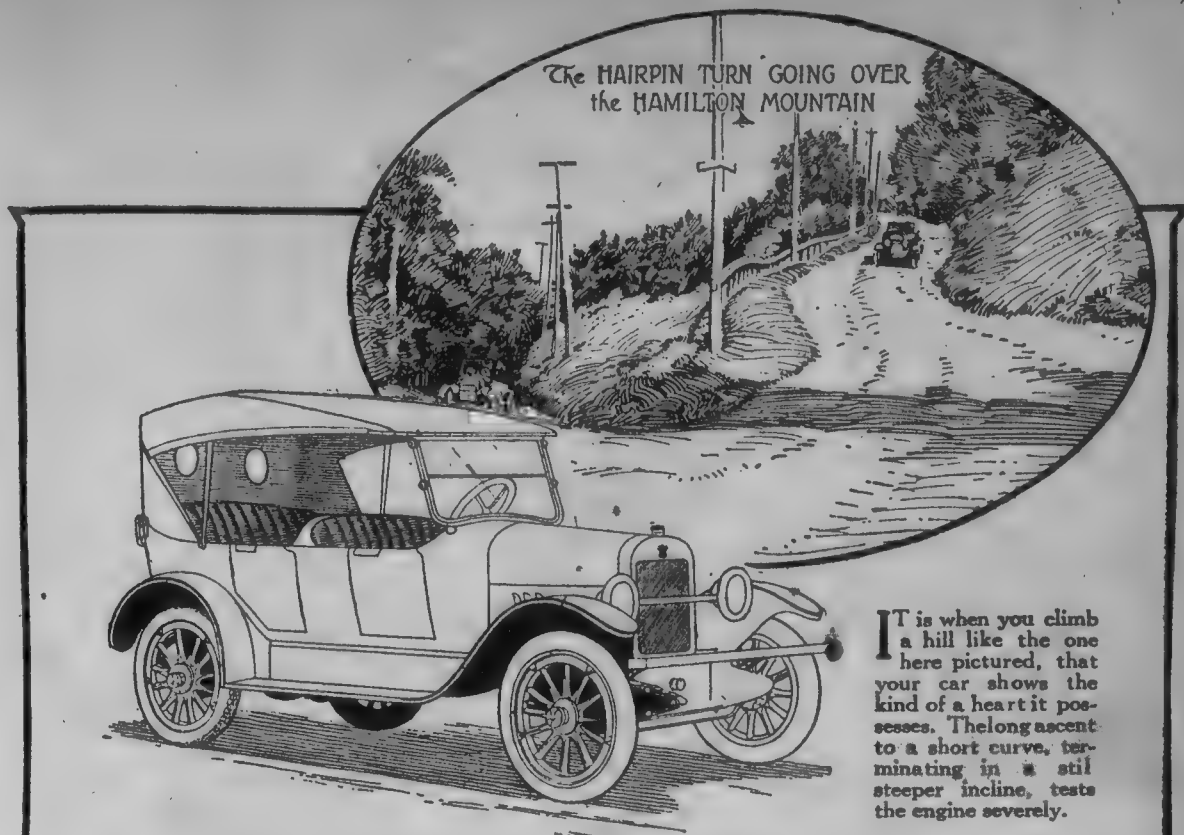
Continued from Page 19

after Austria-Hungary had identified herself with the latter, the British navy had achieved four victories. Each and all of these were accomplished without the firing of a single gun or the despatch of a single torpedo. The elaborate scheme of the Germans, formulated to produce a feeling of panic in Great Britain, had failed; Germany's overseas commerce was strangled; British trade on the seas had begun to resume its normal course, owing to the growing confidence of shipowners and shippers, and the British Expeditionary Force, as detailed for foreign service, had been transported to the continent under a guarantee of safety given by the British fleet.

### The British Sea Power

With the cessation of open hostilities we know that for the sixth time in the history of England the British navy has stood between the would-be master of Europe and the attainment of his ambition. Charlemagne, Charles V, Phillip II of Spain, Louis XIV of France, Napoleon and the Hohenzollern—all aspired to universal dominion, but each was, in turn, checked in his ambitious plans by British sea power. In the history of this sea power there is nothing comparable with the strangulation of German overseas shipping in all the seas of the world. There were 2,000 German steamers, of nearly 5,000,000 tons gross, afloat when hostilities opened. The German sailing ships—most of small size—numbered 2,700. Some of these were captured, others ran for neutral ports, the sailings of others were cancelled, and the heart of the German mercantile navy suddenly stopped beating. A realization of these facts naturally induces the greatest possible admiration for the organization that could, in so short a time, achieve such wonderful results.

Since the happening of these events the submarine has introduced a new factor into the problem and new features have to be studied. The period of reconstruction brings forward phases that have been unconsidered, and phases that will call for the utmost care on the part of those responsible for the shipping industry. Conditions in neutral as well as belligerent countries will vitally affect results, foreign competition in our distant trades requires grave consideration, for the problem is an intricate and difficult one. The war demands necessitated the withdrawal of British tonnage from many most important trades, with the result that a number of valuable lines between foreign countries, which never actually touched British shores, have had to be abandoned by the British shipowner. Obviously, the trade between these countries did not cease, but was carried on by foreign steamers, which, being only available in small numbers, commanded exceptionally high freights. It is at once apparent that these lines have had ample opportunity of becoming thoroughly established and will be most reluctant to relinquish their hold. With this problem to be faced it is hoped that the authorities will liberate every possible ton of shipping, and only retain what is absolutely necessary for the transportation of troops. The war has given a marked impetus to many industries, and nothing can be of more importance than that of shipbuilding, for upon overseas traffic the future of Canada, as part of a vast Empire, which numbers 44,000,000 subjects, must in a large measure depend. If we watch and avail ourselves of every development in the utilization of our enormous natural resources; if we concentrate upon a scientific study of every incidental operation and work and think in optimistic factors, we shall surmount the abnormal difficulties of the reconstruction period and need have no fear as to the future. In the early years of the 20th century we must fight to regain that that was lost; every ounce of energy must be utilized, and yards humming with activity must continue to launch tonnage, to the repetition of the far-fung call of "Ships, more ships, and still more ships."



It is when you climb a hill like the one here pictured, that your car shows the kind of a heart it possesses. The long ascent to a short curve, terminating in a still steeper incline, tests the engine severely.

## The Briscoe Triumphs on Severe Hill Tests

The average car—slowed down to make a curve half-way up a hill—will not "pick up" again on the final ascent. But the Briscoe will. The Briscoe Motor responds to your call for a spurt—and up, up, up you go—a steady flow of power answering your foot pressure on the gas lever—and you finish that long climb triumphantly "on high."

The efficiency of the Briscoe Motor has been demonstrated in several ten-day, non-stop test runs; in one of which a record of over 29 miles to the gallon was established.

In less spectacular fashion, the Briscoe Motor is proving its economy and efficiency by year-in, year-out service, on all sorts of roads, and under all sorts of conditions.



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Sedan .....	\$1,950	Standard Touring .....	1,225
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All F.O.B. Brockville.		Briscoe pays the tax.	

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## The World's Depleted Food Stocks

Continued from Page 68

price, quite apart from any increase in the product itself.

Tin-plate, that before the war cost \$3.00 per box, went as high as \$12.50 and is now roughly about \$8.50. Even at those figures it was not readily obtainable. Restrictions have been imposed on the packing of many products in tin so that sufficient supplies might be available to conserve perishable foods. Despite all hindrances, however, the great canning industry of the Dominion has closed a remarkable year's business in 1918. While stocks were cut down somewhat through unfavorable weather conditions, the pack, taking the country as a whole, has been very satisfactory. Moreover this industry is one that is growing in importance.

### Exports of Food Overseas

The very conditions that have made the conduct of business so difficult for the manufacturers of food products in all countries, will ultimately work to Canada's advantage. In England the enormous demand for fruits and vegetables to feed the army have decimated stocks for civil use. As a result there has grown up a brisk demand from overseas for Canadian canned goods. Especially is this the case in canned fruits, but there is no limit to the variety of canned goods that are finding an eager market. While this is the result of abnormal conditions, it is giving the Canadian canner the opportunity to get his goods on a new market, and their established quality should be sufficient to keep them there.

In the fish-canning industry, conditions have been even more unusual. The British Ministry of Food has taken over by far the larger part of British Columbia's 1,500,000 case pack. This is a sufficient evidence that there is practically no limit to the market to be found for these Canadian-made food products.

The practical discontinuance of business in foreign sardines, on this market, owing to the inability to obtain stocks, and the shortage of English canned and potted fish, has opened a market for packers on both the Atlantic and Pacific seaboard, for a variety of sea foods, which formerly had only a limited market. This period of demand and of good prices, has put these industries on a sound footing that will assure them a lasting business.

In years gone by the consumer looked to England and Scotland for the better grade of jams and preserves. No use to argue with them that an equally good product was manufactured in Canada in a hundred different factories. But for years past there has been a prohibition against the export of these products from England and Scotland. As a result the Canadian manufacturer has had the opportunity to prove his product to the consumer, and it is very questionable if he will ever lose that business. Added to that Canadian jams are finding a ready market overseas. There are markets being created in the West Indies also for these products. So that even when the English and Scotch product returns to this market, as it probably will do, though not for a year or more, there should be an ample market for all.

The same might be said of the biscuit-making industry. When the English and Scotch biscuits were shut off, Canadian manufacturers enlarged their varieties, and went after the business, and got it. They have faced probably the hardest problems of any manufacturer, limitation of sugar, limitation of shortenings, limitation of wheat flour, the three essential products used. They have simply readjusted their operations to these conditions and have gone on serving the public to the best of their ability. They too, will unquestionably profit by the more thorough knowledge of their product that the Canadian public has gained.

Speaking generally, the food production and food handling agencies in Canada have gone through unprecedented years, and have faced conditions that will in all probability never happen again, and they have yet to face the problems of re-adjustment. These are lesser problems, but none the less of moment, but they find the trade well equipped to meet the difficulties. They have prospered in times of adversity, and through facing these conditions they are in a vastly better position to

meet the coming changes than they were in the easy years gone by. Moreover these changes are not changes of a moment. There will be no crisis, because world conditions that govern the distribution of supplies, preclude the possibility of any sudden return to normal.

Prices must decline, no one will deny this general proposition, no one would wish to change this fact, but the change will be gradual; present stocks will find a market at present figures. Future stocks will be marketable on a basis of future purchase prices, and the revision downward will be such a gradual trend that trade should not suffer.

It is an accepted fact too, that business is generally sounder than it was four years ago. The first year of war saw some serious commercial failures and a general weeding out of lame ducks in all branches of the food handling and manufacturing trade. Generally speaking, credit conditions were never as satisfactory in the trade as at the present time. The general tightening of the banks during the past years on loans to small merchants and commercial activities generally has been a blessing in disguise. The wholesaler has been restricting credits to the retailer, and he in turn has generally been putting his business on a more satisfactory footing, in many instances on a strictly cash basis. As a result, there is little likelihood of any serious element of failure being within the bounds of possibility. As an instance of the changed conditions, there might be noted the case of a large wholesale grocery, whose credit manager stated that they had only \$700 of uncertain accounts on their books, and that even these, they believed, were collectable. It is such conditions as these that have put the food handling agencies on such a satisfactory basis, and that assures a reversion to normal conditions, in a way that will scarcely be noticeable to the trade or to the public as a whole.

## Iron and Steel

Continued from Page 36

finding some way of improving these ores and making them suitable for commercial use.

### Ontario Uses Imported Fuel

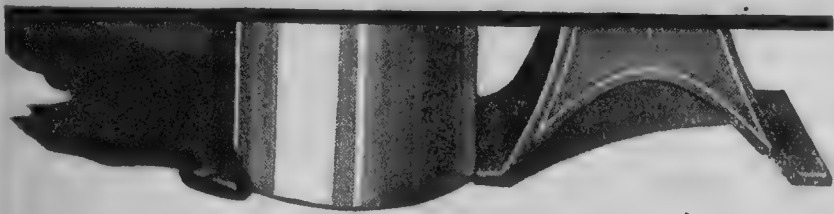
Another difficulty arises from the limited supply of fuel in Ontario, which makes it necessary for many Canadian furnaces to use coke imported from the United States. It has been predicted by many that this deficiency can be made good by the use of electrical power, and that Canadian magnetite ores can be smelted to pig iron in electric furnaces operated by Canadian water power. Unfortunately the electric smelting of iron ore is somewhat costly and cannot in general be used for the production of ordinary grades of pig iron, but something can undoubtedly be done by the production of special qualities of pig iron and also of steel, which can be sold at enhanced prices in view of their high qualities. Canadians would do well to produce such high-grade material, both for the domestic market and for export trade. Experimental work has also been undertaken with a view to reducing the expense of the electric smelting of iron ore, and if this is successful we may expect to have electric furnaces in operation at many points, turning out pig iron and steel for general use.

The foregoing will be sufficient to show the importance to Canada of the industrial research that has been undertaken by the Mines Branch, The Advisory Research Council, and the universities. In order that such processes may be successfully applied to practice we need a body of well-trained engineers, such as are turned out by our universities, and we also need a body of skilful and industrious workmen. The technical training of the workmen, and especially of the foremen, in industrial works has been too much neglected in the past, but it is an important factor in our national development and will receive increasing attention.

In this article I have traced briefly the origin and development of the iron industry, its importance to Canada as a nation and hence to all classes of the population. I have also mentioned some of the services that this industry has rendered to the country during the war.



## Eight Good Reasons Why You Should Buy a DE LAVAL



**GREATER CAPACITY:** New capacities have been increased 10%, without increase of speed or effort required in operation.

**SKIMS CLOSER:** The improved bowl design, together with the patented milk distributor, gives greater skimming efficiency.

**EASIER TO WASH:** Simple bowl construction and discs caulked only on the upper side make the bowl easier to wash.

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**THE MAJORITY CHOICE:** More De Laval are sold every year than of all other makes of separators combined. More than 2,325,000 are in daily use—thousands of them for 15 or 20 years.

**TIME TESTED:** The De Laval was the first cream separator. It has stood the test of time and maintained its original success and leadership for 40 years the world over.

**EQUIPPED WITH SPEED INDICATOR:** Every New De Laval is equipped with a Bell Speed-Indicator, the "Warning Signal" which insures proper speed, full capacity, thorough separation and uniform cream at all times.

**SERVICE WHEN YOU NEED IT:** The worldwide De Laval organization, with agents and representatives ready to serve users in almost every locality where cows are milked, insures the buyer of a De Laval quick and efficient service whenever he needs it.

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LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA  
Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butter-Workers. Catalogues of any of our lines mailed upon request.

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We can supply buyers with Alberta-bred Cattle and Sheep in carlots, shipped anywhere. All stock personally inspected by a member of the firm. We are the largest shippers of livestock in Alberta. Breeders of Shropshire and Oxfordshire Sheep.

Wade & Jack BOX 11  
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## Canada's Textile Industry

Continued from Page 33

facture. The industry of manufacturing textiles was largely domestic until cotton began to be produced in large quantities in America. Furthermore, there are very few fabrics which do not contain, in one form or another, cotton fibre, so that, if it is advisable to have a textile industry at all, such could not be successfully carried out if the manufacturing of cotton were to be eliminated.

**\$35,000,000 Output of Cotton Goods**

The first cotton mill in Canada was established at Sherbrooke, Quebec, in 1884. In 1886, the second mill was started in Montreal, and about the same time another at Thorold, Ontario. By 1871, there were eight cotton mills in the country, operating a total of 95,000 spindles.

From that time the industry grew rapidly. At present there are over 30 mills in Canada, manufacturing cotton goods and operating over 800,000 spindles, and producing a product valued, approximately, at \$35,000,000. These mills are situated at Cobourg, Cornwall, Dunville, Galt, Guelph, Hamilton, Kingston, London, Ottawa, Peterboro, St. Catharines, Tillsonburg, Toronto, Waterloo, Welland and Woodstock, in Ontario; at Coaticook, Granby, Hochelaga, Montmorency Falls, Montreal, Rock Island, Shawinigan Falls, Sherbrooke, Three Rivers and Valleyfield, in Quebec; at Dorchester, Maryville, Milton, Moncton and St. John, in New Brunswick; and at Halifax and Yarmouth, Nova Scotia.

Canada's woolen mills number about 125 and are distributed throughout the country as follows: In 78 towns and cities in Ontario; in 12 towns and cities in the province of Quebec; four in New Brunswick; 12 in Nova Scotia; three in the province of Prince Edward Island; and two in Western Canada.

**Rapid Progress of Knit Goods Industry**

The wonderful progress of the knit goods' industry has been a conspicuous feature of Canada's industrial development during the last ten years. Today, there are over 100 knitting mills of importance in Canada, of which over 30 have been erected during the past ten years. Their equipment, not only in motive power and machinery, but in the dyeing, bleaching and finishing branches, is unsurpassed anywhere. Many of the mills, particularly in western Ontario, which is the section in which this industry has particularly prospered, are supplied with electric power or turbine power from the large rivers.

The bulk of the knitted goods turned out in the factories consists of men's women's and children's underwear, cashmere, wool and cotton hosiery, mitts and gloves, sweaters, narrow fabrics and fancy novelties. It is to the manufacture of novelties, knitted ties, sweaters, toques, and so forth, that a large portion of the remarkable development of the last few years is mainly due. Canada's knitting mills are situated at 65 towns and cities in Ontario; eight in the province of Quebec; one in British Columbia; one in Manitoba; three in New Brunswick; one in Alberta; five in Nova Scotia; and one in Prince Edward Island. Jute, flax and linen goods are manufactured at 33 places in Ontario; two in Quebec; one in New Brunswick; and one in Nova Scotia. Silk goods are manufactured at six places in Ontario and three places in Quebec.

**Machinery on Peace Time Basis**

Continued from Page 30

ments. If a person had any degree of plasticity in his make-up he could not help but absorb some of the shell-shop training. He couldn't guess, he couldn't measure with a string. He had to work under the eye of the inspector, and in shells there were no "good-enough" chances to be taken. A shell was either perfect or it was marked "reject." If a man who had two or three years' training under such circumstances is not a better or more careful workman in any line he may choose to follow after, then there is not much chance of his going much higher.

A good many stories have been heard about high wages that were made in the shell shops during the war. It may be taken for granted that some of



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### Keep Out Jack Frost

FLAXLINUM put in the side walls and roof of your home will make it deliciously warm in winter and delightfully cool in summer, in fact from 10 to 15 degrees cooler.

**INVESTIGATE !**  
You are bound to be pleased.  
Thirty per cent. of your fuel pile will be saved.  
It is cheaper to build a warm house than to heat a cold one.

FLAXLINUM is a board form of insulation made from flax fibre which has been thoroughly degummed and chemically treated so that it is rat and vermin proof.

It is equal to 30 thicknesses of building paper or four inches of back-plaster.

Ask your lumber dealer about it or just drop us a card and one of our De Luxe Sample Booklets will be mailed to you at once.

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An X-Ray view of a barn equipped with a King System of Ventilation

IS the air foul? Do you find excessive moisture on the walls in cold weather? The cause is poor ventilation. Let us correct those conditions for you with a King System of Ventilation.

Before a King System goes into your barn, the King ventilating engineers make a complete study of the building and plan the system to fit it. Then we supply all parts for the entire system, including fresh-air intakes, foul-air flues and King Aerators for the roof. Every King System is guaranteed, and by guarantee we mean that our responsibility does not cease until your barn is properly ventilated. Send for the King Catalog.



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**KING System of Ventilation**

The King Aerator can be used with or without the other units of the King System. Because of its beauty many farmers use the King Aerator to beautify their buildings.

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Incorporated 1869

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Capital Paid Up.....14,000,000  
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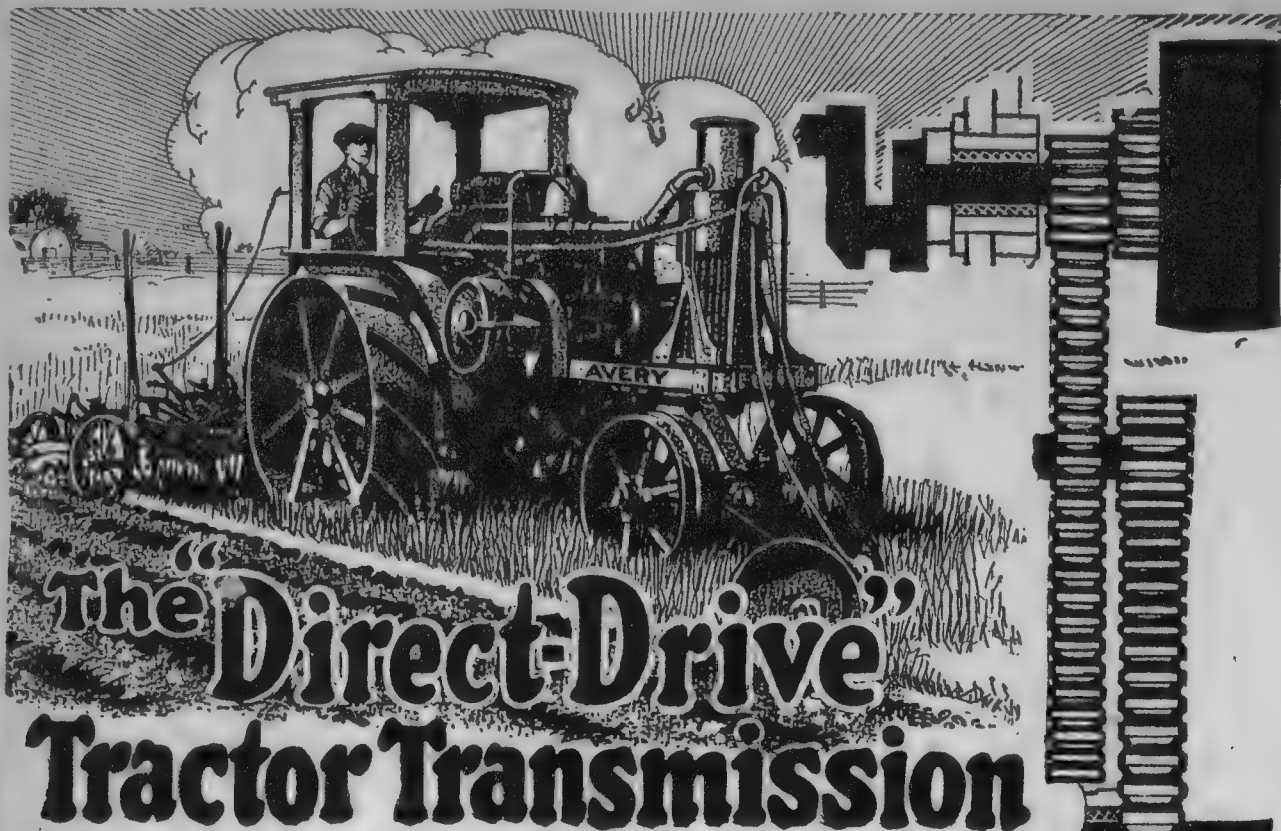
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## The "Direct-Drive" Tractor Transmission

**T**HERE are just two things you want a tractor to do for you—to furnish you with traction and belt power. How much of the power of the motor you get at the drawbar and the belt pulley depends upon the efficiency of the transmission. The Patented Sliding Frame Transmission in Avery Tractors gives you a "Direct-Drive" in either high, low, reverse or in the belt.

### The Most Efficient Transmission System

The Avery "Direct-Drive" Transmission gives you the greatest amount of power at the drawbar because: It has only three shafts, only three gear contacts, and only six gears between the motor and the drawbar. All intermediate gears, shafts and bearings are eliminated. Furthermore, all Avery gears are straight spur gears; all are located outside of the frame, easily accessible and yet well protected; all are made of steel and semi-steel, which means that they are able to stand up under the hard strains of tractor work.

The Avery "Direct-Drive" Transmission gives you all the power of the motor at the belt. The belt pulley is located right on the end of the crankshaft. No power is lost through extra bearings or by turning corners

through bevel gears. Because the motor runs at low speed, we are able to use a larger belt pulley, which grips the belt better.

### The Tractor with the "Draft-Horse" Motor

Avery's are also the tractors with the "Draft-Horse" Motor—the Perfect Opposed Motor that is designed especially for tractor work and only for Avery Tractors, the motor with exclusive and protected features, such as the Renewable Inner Cylinder Walls, Adjustable Crankshaft Boxes, Duplex Kerosene and Distillate Gasifiers.

Avery Tractors are successfully used by farmers in all 48 States and 61 Foreign Countries. They are built complete in Avery Factories and are backed by branch houses and distributors covering every State in the Union.

### Write for the New 1919 Avery Catalog

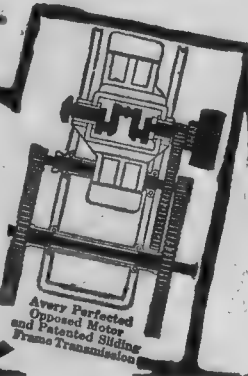
showing Avery Tractors built in sizes for every size farm, with the smallest size tractor selling at only \$550, f.o.b. Peoria; the Avery Motor Cultivator, which cultivates corn, cotton, etc.; and Avery Grain-Saving Threshers and Plows for every size tractor. Also ask for FREE Avery Tractor Correspondence Course and "100 Questions and Answers to Tractor Troubles." See Avery samples at the nearest Avery dealer.



The lowest priced tractor in the world that is really efficient

There's a Size Avery Tractor for Every Size Farm

Five Sizes—the Same Design. Standardized



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Number 25

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R.H. WILLIAMS' & SONS LIMITED REGINA, SASK.

A little book of genuine helpfulness to those who just now are planning for Easter—the most joyous season of the year.

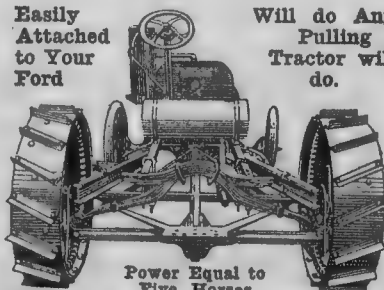
Women's Garments, Men's Wear, Footwear, Boys' Wear, New Merchandise, carefully selected, at moderate prices.

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Easily Attached to Your Ford

Will do Any Pulling a Tractor will do.



Power Equal to Five Horses

## Fond du Lac Tractor

\$295 f.o.b. Winnipeg

Will not hurt your car—pull comes on axle and wheels of attachment, which are strongly built.

Gasoline Engine & Tractor Co. Ltd.  
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these need to be mixed with a grain of salt, but for the most part pay was good, and men and women, in many cases, made more money than they had ever dreamed of being able to take home. And that is what hurts a good many feelings now. It's a pretty hard proposition for a man who had been making in the neighborhood of from \$40 to \$60 a week to go around applying for work, only to find that there's nothing much offering beyond \$3.00 per day. Of course, there were some thrifty ones who kept down to brass tacks and laid aside a goodly portion of their high wages, but these were hopelessly in the minority. This was true in the case of women probably more than men. They dressed as they never dressed before. They wore jewelry that they had never got much closer to than peering through the shop windows. Here's a typical case. It is not necessary to give many of them. A foreigner, who could not speak a word of English, worked in a forging plant at the cutting-off machine. That is, a machine to cut a ring in a solid bar of steel, and it was the foreigner's job to break the rest of the way with a heavy hammer. Of course, this chap's chief asset was a tremendous supply of brute force. Well, he walloped away with that great hammer and whacked off those steel shell lengths to the tune of \$60 per week for a good many months that ran into years. He "salted down" everything. He was earning at the rate, easily, of \$3,000 per year and spending about \$500 for his living. He has since gone home to retire. Of course, living went up with leaps and bounds, and in many cases the high rate of pay was pretty well absorbed by the high prices for all sorts of food, rent and clothes. Now that the high rate of wages have gone and the high cost of living remains, a nasty situation is here, and it is not solved by any means.

### The Record of Production

It is not the purpose of this article to recount the output of shell shops. It is sufficient to point out that in December of 1914, there were two firms shipping munitions; January, 1915, eight firms; April, 1915 14; and in June of the same year, 36, with an average weekly production of 77,000 shells. Three years later, in June of 1918, the average weekly production of shells from the Canadian machine shops was \$86,000. The production of war material in Canada called for the use of 1,800,000 tons of steel, and of this amount over 75 per cent. was made in Canada.

### To the Scrap Heap

There is a touch of pathos in the sequel to the era of tremendous production by these single-purpose machines. They were much in demand in the days of the war. They were sought after and courted in a vigorous manner. They were not much to look at, but they could be made quickly and they could do the work. They stood against all sorts of treatment for seven days a week, 24 hours a day, and a good many of them made a lot of money for their shops too. But today! Nobody loves them—nobody wants them. You will find lots of them shoved away in sheds; some have a covering, some have not. Rust has begun to put marks on their noses, and the spiders are busy decorating their strong limbs with their fancy work. There are no commercial operations that call for their assistance. And the junk dealer has come in looked them over. He has added a new list to his business, and it is called "breakage," and the price he affixes is \$18 per ton. So away they go, those single-purpose machines of the war days. They come under the drop hammer and the castings are reduced to cupola sizes. If they are particularly heavy and strong, and resist the drop hammer, a little dynamite is brought up, and the ruin is completed.

The single-purpose machine of the war shop has passed away. When business picks up again he will go over to the melters, some day, and be recast into something up to the times. But for all that, the single-purpose machine did a great work, and he played no small part in keeping German from being made the court language of Canada.

## Canadian Flour Mills

Continued from Page 21

continue to draw its requirements throughout the year without necessitating any back-hauls or any great diversion from the direct line of transportation, which would so increase its costs that it could not compete, and it must be situated on well-equipped transportation routes.

### Flour Extraction

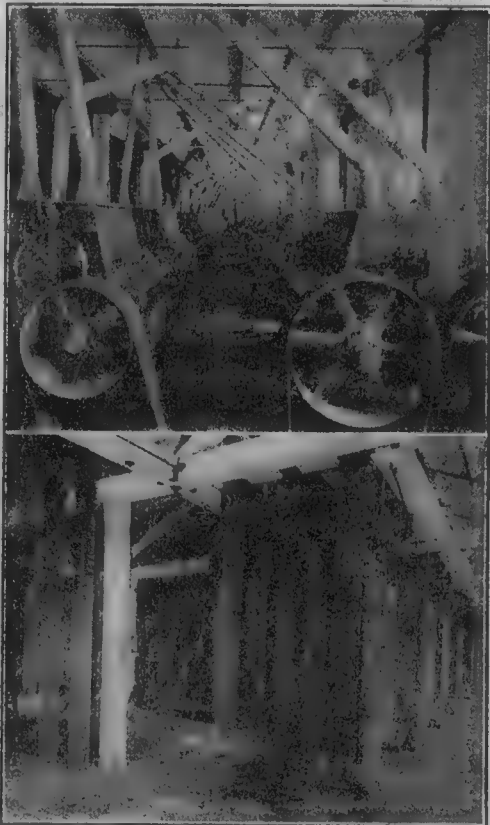
It is the inside kernel of the wheat berry which is ground into flour, the outside coverings making the bran and shorts. Graham flours contain proportions of the outer coverings with the flour. The flour content of wheat varies with different kinds of wheat, different grades, different districts and different seasons. With good wheats the average is generally something over 70 per cent. The percentage actually made into flour is called the extraction. If, for example, a barrel of flour (196 pounds) is produced from the grinding of four-and-a-half bushels of wheat (270 pounds), then the extraction is a little over 72 per cent. If the whole of the flour content is extracted and issued as one kind of flour this is known as straight run or 100 per cent flour. Under the critical conditions with regard to food supplies last year, the Food Administrations of both Canada and the United States, required the production of straight-run flour in order that the greatest amount of wheat should be made available for human food. The extraction in Canada figured out at about 76 per cent. With the prospects of larger supplies at the beginning of the present crop year the conditions were slightly modified, so that a flour of higher quality, with good keeping properties, capable of being shipped to any part of the world, could be produced, but no division of flour into grades such as existed before the war is to be made during the present crop year. In normal times, the flour stream is generally separated by the best equipped mills into grades, about 60 per cent.

going to form what are known as "patents" and the balance, after a little low grade has been taken off to be sold as feed, is known as "clears." Each mill has its own standards and sells its different grades under special names. There is relatively a large demand in Canada for the highest grades made, while on the other hand there is a comparatively limited export market for the higher patents.

The outer coverings of the wheat, of which there are several, can also be separated, the main division being into bran and shorts; but the separations can be made in different ways, the grinding

can be to different degrees of fineness, and differences can be made by the extent to which flour particles are allowed to remain in the feeds, or by the quantity of low grade flour mixed in. Feeds under different names and of different qualities are therefore offered for sale. These feeds are among the most important of the foodstuffs for animals, and, perhaps, particularly for milch cows and young pigs. There must be a very large manufacture of flour in order to produce any considerable quantity of these feeds. In the making of a barrel of flour from the better grades of wheat only between 60 and 70 pounds of bran and shorts are produced. In 1917-18, in grinding 86,000,000 bushels of wheat, there was produced about 1,300,000,000 pounds of feed, which is very little when compared with the numbers of animals in Canada. According to the latest estimates of the Dominion Bureau of Statistics, there are in Canada 10,049,696 cattle, of which 3,542,429 are milch cows, and there are 3,608,315 horses, 4,289,682 swine and 3,037,480 sheep. If it be assumed that half of the feed was bran and the other half shorts or middlings, then the milch cows in Canada could have eaten up in 37 days all the bran produced in that year on a ration of five pounds per day each. The importance of mills as local producers of feed is recognized in every country in the world, because not only is it costly to transport feeds over great distances but their keeping qualities are not comparable to those of good flour.

No thorough investigation has ever been made in Canada to determine the average consumption of flour per head of population, and the records of milling production are not so complete for a series of years that an accurate estimate could be formed from them. It is commonly supposed, however, that each person in Canada, on the average, consumes the products of from six to six-and-a-half bushels of wheat, or from one-and-a-third to one-and-a-half barrels of flour in a year. Each individual in Canada is therefore directly interested in the industry to the extent of a little over one barrel of flour. The number of one-pound loaves of bread that can be made from a barrel of flour varies with the "strength" and other qualities of the flour, but the number would be something like 250 loaves; but bread is only one of the many forms in which flour is consumed. Canadian flour has all the superior qualities inherent in Canadian wheat and it is as well-made as any flour in the world.



Interior Views of Modern Flour Mill.  
Upper: A section of the grinding floor.  
Lower: View of sifters.

## Canadian War Industries

Continued from Page 13

being 40,246. This involved the handling of no less than 4,160,000 component parts. British Munitions Limited was the largest fuse-loading plant of its kind in allied territory, probably in the world, the floor space extending to seven acres. The total number of fuses loaded and assembled here was 3,400,000. The work of the plant included the following operation: (1) Blending fast and slow-burning powders; (2) Forcing the powder into the time rings under a

pressure of 68,000 pounds per square inch; (3) Assembling the 52 component parts, which make up the complete fuse; (4) Packing, checking and shipping the completed product.

The story of Canada's achievements in the manufacture of munitions would be incomplete without special mention of the notable services rendered by women workers. The shortage of labor in the early stages of the production of munitions was acute. Comparatively

NO  
COMPETITION



In a class

GUARANTEED UNSHRINKABLE  
"CEETEE"  
PURE WOOL

Two fold

This is no... backed by facts.

There is no other garment made in Canada by the special process of similar machines to those used for making "CEETEE."

And every "CEETEE" garment is of the HIGHEST GRADE ONLY—shaped in the knitting to fit the form—made from only the finest and purest Australian merino two fold yarn—all selvedge edges, knit together—not sewn—then put through our special process by which we GUARANTEE it not to shrink.

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"CEETEE"  
THE PURE WOOL  
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THAT WILL NOT SHRINK

Made only by C. TURNBULL CO. of GALT, Limited, GALT, Ont.



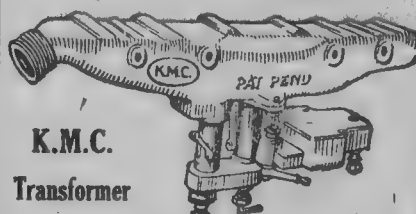
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—yet still retain your car for pleasure. Design and material of highest quality. All gears enclosed and run in oil. Equipped with shock absorbers. Strong steel drive wheels—steel construction throughout. Plows six acres a day with two 14-inch bottoms; also seeds, harrows, harvests, etc.



"FORD CAR 20 MINUTES"  
**Ford-a-Tractor**

Converts your Ford into a tractor that will do the farm work equal to four good horses. Fitted with



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Transformer

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W.D.C. COOLING SYSTEM which changes the water in cylinder six times a minute, positively preventing overheating under tractor conditions. Write for facts.

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Made in the Dr. O. M. Franklin Laboratories, is guaranteed to protect a calf for life against blackleg. It has stood the test for over four years on over a million calves and our users have every confidence in it. We back that confidence with a written guarantee if you wish, and charge you 50 cents per dose. Or will send you the same VACCINE for 40 cents per dose without the guarantee. We make one quality of vaccine only. Syringes for injection, \$2.50. Write for our booklet, today.



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## The Best Fruit--Strawberries

*The Everbearing variety thrives under Western conditions and produces fruit from July to November*

If there is any one thing edible that is more tempting than a dish piled high with fresh delicious strawberries well sweetened, it is a great thick, juicy strawberry short cake like mother used to serve in large squares with rich, yellow cream. And strawberry preserves, you remember quite well, I am sure. It almost makes one homesick to think of it.

A few years ago a new variety of strawberry was introduced into Canada. It was called the Everbearing and has been thoroughly tried out during the past ten years. The opinion of all those who have grown the Everbearing is that it seems to be especially adapted for reproduction under Western conditions and can be successfully grown in any one of the three prairie provinces.

The Everbearing Strawberry is exactly what its name implies. The plants will begin to flower early in June, and keep right on flowering and maturing fruit until the blossoms are destroyed by the winter frost. If the first blossoms are destroyed by late frosts in the spring, within a few days another crop of flowers appear and in a few weeks develop into the most tempting and delicious of strawberries.

On one plant of this variety can be found, from June until the late fall, the bud, the flower, the immature berry and red, ripe berries of large size and the most delicious flavor.

Think of it, a strawberry that bears fruit continuously, day after day, week after week, from July until frost comes. Such is the Everbearing Strawberry and this variety is especially adapted for reproduction in Western Canada.

Mr. A. P. Stevenson, one of Manitoba's most successful fruit growers, says of the Everbearing Strawberry: "We have been growing the Everbearing Strawberry for the past ten years with excellent results. I have no hesitation in saying that they are better adapted to our conditions in Western Canada than the old June bearing variety. The Everbearing has the following advantages: A good crop of fruit the first season the plants are set out; also should a June frost kill the blossom, in two weeks there will be plenty more to take the place of the damaged blossoms; the fruit of the Everbearing variety is of better quality and there is the advantage of having fresh strawberries up to the first of October."

Mr. W. J. Bougen, another successful fruit grower says of the Everbearing: "It is of superb quality, very prolific and when it freezes up is full of fruits and flowers in all stages of development. It is the safest bet today for Horticulture in Manitoba and you cannot recommend it too highly."

No matter if you have previously failed in your attempt to raise strawberries, you can have fresh, delicious berries for your table every day this summer if you will secure hardy plants of the Everbearing variety. And remember, you don't really know how good strawberries can be until you have tasted a heaping full dish of Everbearing Strawberries gathered fresh from your own garden while the dew is still on the vines. You will know this this summer if you secure a few Everbearing plants now. This variety is being offered by some of the Western Nurseries at from \$7.00 to \$8.00 per 100 plants. We have been successful in securing a limited number of the Everbearing plants from The Prairie Nurseries Limited. These plants have been produced in their nurseries at Estevan, Sask., which insures their being acclimated and best for reproduction in the West. We believe you will have no difficulty in producing an abundance of the very choicest of strawberries if you will secure some of these plants.

We believe we have discovered an exceptionally good thing and as has always been our policy we desire to give our readers the benefit. You will be rewarded a hundred times over for the little effort you will have to make to secure these plants in the many, many treats of juicy red berries these plants will produce for your table all through the summer.

Do not put off sending in your order. Be sure of securing some of these plants by writing us TODAY.

Send us \$1.50 for one new one-year subscription, or \$3.00 for one renewal subscription for three years, and we will send you postpaid 20 of these hardy Everbearing plants that will produce the most delicious fruit all summer long. For every new one-year subscription at \$1.50, 20 plants; every three-year renewal at \$3.00, 20 plants; for every new three-year subscription at \$3.00, 40 plants, and there is no limit to the number of plants you can secure at the above rates. Your own subscription will count—but must be accompanied by at least two other subscriptions.

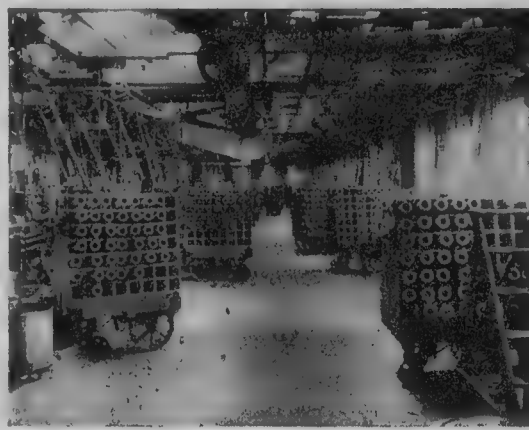
Get 80 or 100 of these and you will have an abundance of strawberries this summer. Send in subscriptions for three or four of your neighbors who are not now Guide readers, TODAY! Do not delay, do not put it off. Make sure of the number of plants you would like to have by writing down the names and addresses of the subscribers right NOW. Phone your neighbors that you are sending in their subscriptions to get strawberry plants, invite them to a strawberry dinner for next summer, and mail your order the first time you are in town.

Remember those heaping full dishes of strawberries? Those great thick juicy shortcakes? They will be yours if you do this NOW.

**The Grain Growers' Guide - Winnipeg, Man.**

few skilled men workers could be assigned to skilled work. Women could relieve them for this highly necessary work by performing the more humble tasks. At first they were capable of doing work that consisted only of man-aging machines. Before October, 1916, no women had ever worked in Canada as producers in a metal plant. There was a prejudice against employment of women. The need of shells and the need of shell-makers dissipated prejudice and put women into Canadian munition plants. At first they were given the light work to do, and were set to tend- ing a machine; work that required little intelligence on the part of the oper- ator, but was extremely trying on the nerves. It soon be- came appar- ent that women ex- celled in work that required ac- curacy and delicate handling. They be- came expert in fuse making and the making of fuses means being careful even to the 1-1,000th part of an inch. A shell with a defective fuse is worse than no shell at all. It may fail to explode, it may explode in the wrong place, at the wrong time, or in the wrong way. Canadian women made fuses that made the perfect shell. Not only in fuse making did they excel. Heavy work be- came easy when machines, at the sug- gestion of the women themselves, were changed in position. Finally, there was no difference in the work done by men and women. Within five weeks of the time they first heard of a 9.2-inch shell, 400 women in one factory were suc- cessfully turning them out, performing every operation from that subsequent to the fabrication of the metal to and in- cluding that of shipping.

Women worked cheerfully and long. In the time of greatest need there were 35,000 women at work in the munitions factories of Canada. After the first call there was no shortage of woman help. A badge was given to every woman who worked for 30 days continuously. For each additional six months' service a bar was added. In all 18,999 badges and 8,032 service bars were used in Canada. They were earned as follows: One, bar, 4,003; two bars, 1,135; three bars, 447; four bars, 84; five bars, 16; six bars, 2. In addition a commemorative badge was awarded to all workmen in the various plants who served continuously for a year or more. Far from disturbing labor conditions the entry of women into munitions plants aroused the most wonderful co-operation and enthusiasm



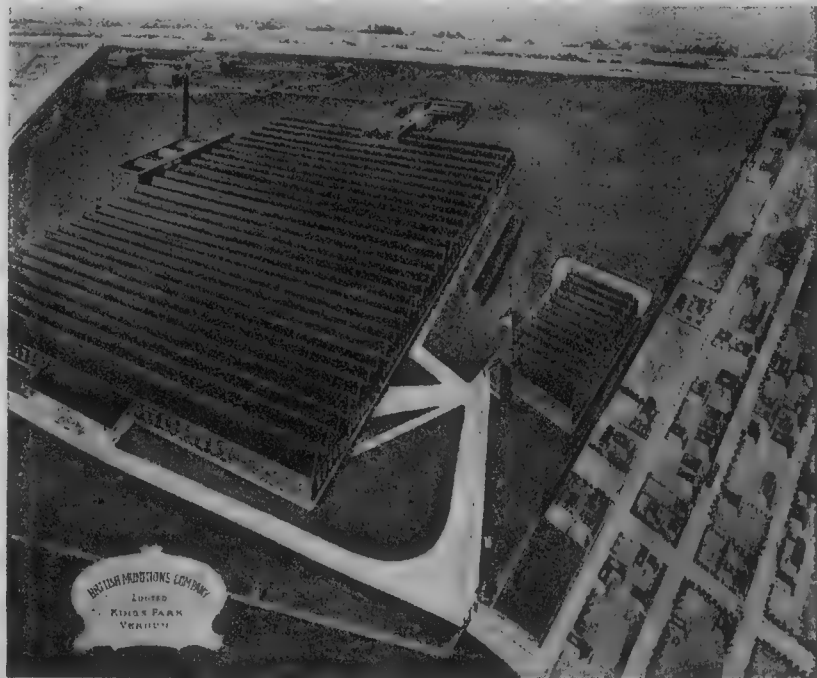
Truck Loads of Shells Ready for Filling and Fusing in a Government Munitions Plant.

and actually dispelled what might have been a serious drawback in "serving the man who served the gun."

Canada's great achievements in the manufacture of munitions was rendered possible only by a high order of organ- izing ability, and a wise and energetic direction by those charged by His Majesty's government with the respon- sibility for the expenditure of so many millions. In the early stages of muni- tions making this responsibility was vested in the Shell Committee, with Sir Alexander Bertram, as chairman. When, in November, 1915, the Imperial government had placed munitions orders

in Canada, amounting to approx- imately \$300,000,000, the volume of business appeared to necessitate the estab- lishment of a board directly re- sponsible to the Imperial Ministry of Munitions. The opera- tions of the Shell Com- mittee thereupon passed into the hands of the Im-

perial Munitions Board. Of this board, Sir Joseph Flavelle was made chairman, with full administrative and executive authority. What was accomplished in the production of airplanes, of shells and fuses, of explosives and chemicals, of metals and compounds, needs no bestowal of adjectival praise or recog- nition. The figures as set forth in this article speak for themselves. The Imperial Munitions Board has not ad- vertised its own exploits. It has given the credit, and great credit is, un- doubtedly, due to the manufacturers who adapted their plants to the busi- ness of munitions making, and to the thousands of men and women who toiled at the lathe and in places of great re- sponsibility and danger. Credit has also been given to the many patriotic Canadians who gave freely of their ser- vices when called upon with no other reward than the satisfaction of render- ing some service to the State. Of his administrative staff, numbering close to 1,000 men and women, Sir Joseph Flavelle, in an address before the Ot- tawa Canadian Club, declared that no body of men charged with serious duty ever received more generous, more loyal, more efficient support than that rendered by his co-workers at head office. And of the business men, professional men and others who were called upon from time to time, he expressed the belief that if the board were to telegraph each city in the Dominion and ask for a dozen of the ablest men in the city, the com- mon reply by wire would be "I will be down on the next train."



Bird's-Eye View of the Plant of the British Munitions Company, Verdun, Montreal.

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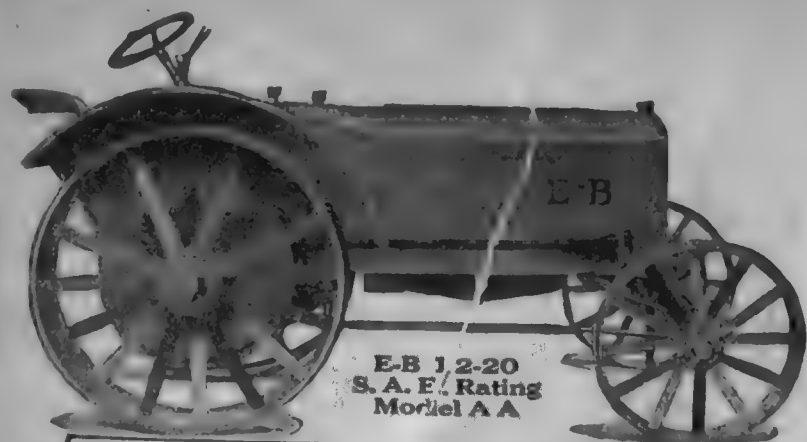
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Land that will grow grain, and fodder crops of various kinds may be had at from \$11 to \$30 an acre. Only one-tenth down and 20 years to pay the balance.

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"As I had no experience in irrigation I felt somewhat blue (in the spring of 1918), as it looked as if I were not going to have anything and the land not prepared for irrigation. I went to work and got the water on as far as I could, and when I threshed my crop I had 1,500 bushels of wheat, 700 bushels of oats, and 550 bushels of potatoes. At present prices would amount to \$4,300, which paid my indebtedness and helped me on to another crop."

"We can raise nearly all kinds of garden truck, including water melons, cauliflowers, tomatoes and sweet corn. Alfalfa can be grown to perfection under irrigation."

Mr. Ramer came to Alberta from Pennsylvania in 1917, settling on a quarter section near Duchess, purchased from the C.P.R.

**ALLAN CAMERON**

General Superintendent of Lands, C.P.R.

908 1st St. East  
**CALGARY**

## The Leather Industry of Canada

Continued from Page 18

once the centre of the tanning industry of Canada. There are a few tanners here who have stood still through the years, refusing to keep step with progress, refusing to adopt up-to-date methods, refusing to install modern machinery. These, happily are few and becoming yearly less. An example may be taken from the same city and the same locality of a different type of tanner who moved from among the others to the suburbs of the city and at Desalabery set up a new and roomy plant with modern machinery and methods. His former neighbors are still in the rut, while he is awaiting peace to extend his trade beyond the boundaries of the Dominion.

Some of the more progressive establishments in the province of Quebec, exclusive of Quebec city, are those at Danville, St. Hyacinthe, Stanbridge East and Three Rivers. There are also the factories at Plessisville and Acton Vale where shoes and larrigans are made as well.

Montreal has been a tanning centre since early in the nineteenth century. At present there are a number of large and progressive tanneries situated throughout and about the city.

In Toronto the head offices of several

wealth and the development of small communities. It is a legitimate industry for this country and an indigenous one if it can be said to be indigenous to any one part of the world. Tanneries requiring the tan-bark are close to the supply and those requiring extract can obtain it as easily and cheaply as in any other part of the world. The other conditions necessary for a successful prosecution of the tanning industry we possess. These are: (a) a supply of hides; (b) facilities for distributing tanner's produce; (c) a supply of water; (d) efficient labor. Perhaps the condition (c) is the most important inasmuch as it cannot be transplanted. This condition is more applicable to Canada than the others, for Canada is more plentifully supplied with water than any country on the face of the globe. As to condition (a) Canada has an animal population of 7,920,940 cattle, 2,369,354 sheep and 3,412,749 horses. Sheep skins can be brought direct from Australia, and goat-skins from China, cheaper than they can be secured in Europe and as cheaply as in the United States. Our domestic supply of hides is in normal times greatly augmented by shipments from the United States. With regard to transportation facilities we



Where One of the Big Ontario Leather Companies Gets Its Power.

tanneries are situated, including the largest firm of tanners in Canada, having three large and modern plants.

In Kitchener, Ont., are two large and important tanneries. One of these is among the largest and strongest tanning organizations in Canada, having in addition to the plant at Kitchener others at Penetang, Woodstock and Hastings. Taken with the two largest Toronto firms the triumvirate place the Canadian leather industry in a position to compete with any country in the world. They are able to hold their stocks over for indefinite periods and extend their propaganda wherever they see apparently profitable markets. Kitchener also boasts Canada's premier harness leather manufacturer. There are several other large and modern concerns in Ontario. West of Ontario the only large concern is the Great West Saddlery Co., at Winnipeg, Man.

In the early days when Quebec was the great tanning centre, it was customary for tanneries to be huddled together with little or no room for development or sanitation. As a result the tanning district was one to be avoided unless necessity of urgent business drove one thither. This grouping of tanneries within a confined area is still visible in Quebec about St. Valier and Arago streets where nearly every building is a tannery or a hide merchants' establishment. There is a present, however, throughout the Dominion a general and a healthy tendency towards decentralization. The big plants are being built in country towns where there is plenty of room for development, plenty of fresh air and decent housing conditions for employees. The tanneries have played a great part in the development of the particular towns in which they are situated and will continue to do so. They bring population and wealth in their train and it would be a wise measure for municipal boards of trade to have an eye to such industries.

The industry is as yet in its childhood, if not its infancy, but it is in strong and capable hands and big with possibilities both for the creation of

are well equipped, being on two oceans and having efficient railways and canals throughout the Dominion itself. Efficient labor is our only short-coming. We have, however, a nucleus of well-trained tanners and we may rely upon time and training to provide the rest. As we sum up the situation we find the conditions, especially the more fixed ones, fulfilled. There is no reason why Canada should not hold the most important place in the world's leather industry in the fullness of time.

### Export Trade Opportunities

Before the war Germany was a great manufacturer of leather goods, but as the majority of her hides came from India from whence she will no longer be able to obtain them, and as her own and her neighbor's herds are so depleted through the war she may be counted, for some years at least, a consumer rather than a producer. Even England, with her livestock depleted to feed her blockaded people, will be forced to import large quantities of leather during the next year or so. Thus as Canada and the United States will be called upon to appease to a great extent the present world famine of leather, great opportunities are presented for the tanners to establish new and lasting markets for their produce which they will not neglect. An example has already been offered of what Canadian tanners are capable of doing in establishing an export trade. Prior to 1915 Canada exported very little leather to the United States as there was a prohibitive tariff placed upon our goods. In 1913, however, the Underwood-Simmonds Law was passed in the United States repealing the duty and throwing the market open to Canadian tanners. Immediately a trade sprang up in sole and belting leather which has steadily increased to the present time. With regard to harness and saddlery, patent, calf and kip leathers, prior to 1916 no use was made of the United States market, but in that year a considerable trade sprang up which has increased in volume each year. The following figures on the subject speak for themselves:—

Year	Value of Exports to the United States.
1913	\$ 119,843
1914	2,007,151
1915	2,443,126
1916	4,431,855
1917	4,398,658
1918	8,058,670

During the war, and especially during the latter part of the war, the demand for leather was great and pressing. Canadian tanners, like all others, experienced a shortage of labor due to the high wages paid by munition plants and the enlisting of men in the army. Those who tanned goat skins were unable to secure raw material owing to the shortage of ocean tonnage, skins being imported from overseas. The embargo on the exportation of hides from the United States cut off a great source of supply from the tanners of cattle hides. There was also difficulty for all in obtaining tanning extract and other than standard color dyes. As a result of one drawback and another most tanneries were running to only fractional capacity when the armistice was concluded.

Now, however, the factories, up-to-date in every respect and fully equipped with modern machinery, are ready and waiting to handle large increases of goods. The men are returning from munitions and war to work the machines, and raw material will again be available in more or less unrestricted quantities. The markets of the world are calling for leather and the great pre-war leather-producing countries, with the exception of our neighbor across the border, are turned into consumers. The stage is set for a great burst of development in the leather industry of Canada.

## Manufacturing Agricultural Machinery

Continued from Page 22

Labor costs are unchanged from the last few months of 1918, and there appears to be little likelihood of a reduction. Thomas Findley, president and general manager of the Massey-Harris Company stated to the writer a few days after the signing of the armistice, that wages would not be reduced until the cost of living had begun to decrease, since the remuneration of workers could not be lowered with justice while the prices of the necessities of life remained at war-time levels. At that time several hundreds of munition workers had already applied for and received work in this industry, many of them being content to take somewhat smaller wages for work of a permanent character than they could get in the munition plants, with its rather hazardous outlook afforded in the latter employment.

Domestic trade during the last year has been about normal. Notwithstanding scarcity of labor on Canadian farms, strenuous efforts have been made to increase production. Acreage under crop has been increased under the stimulus of war needs, and this has been attained largely by the use of modern labor-saving machinery. A development of major importance has been the improvement in efficiency and the more extensive use of the farm tractor. Besides increasing production the tractor has tended to alter agricultural methods to a great extent. Europe was comparatively little acquainted with large-scale grain production, a few years ago. The new methods are being forced into prominence by economic necessity. The wastage of man-power has made it necessary to increase the efficiency of the farm workers that are available.

Canada has something like 10,000 farm tractors already, and the utility that these implements have demonstrated is causing the number in use to be multiplied. The manufacture of tractors has been entered upon in Canada, and this department of the agricultural implement industry promises to take on more and more importance. The farmers of Eastern Canada, with their relatively small holdings used many more tractors in 1918 than during the preceding season. The demands in the West have shown phenomenal increases, and the possibilities there are almost unlimited. The future of the entire industry is bright, and its prospects are commensurate with the possibilities of the Dominion's agricultural production.



### Specifications:

Power—Pulls three plows—30 HP on belt. Tested at the last National Plowing Demonstration at Salina, Kansas, developed over 81 HP at 782 RPM.  
 Motor—2 cylinder twin, 4 cycle. Valve in head. 750 RPM.  
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Yes, you want more—you must have more of a tractor than that. There must be a reservoir of eager reserve power or the tractor will die on an up-grade.

You want such power and such reserve as you can find only in the New Hart-Parr—the tractor that burns power-full kerosene as other tractors burn gasoline.

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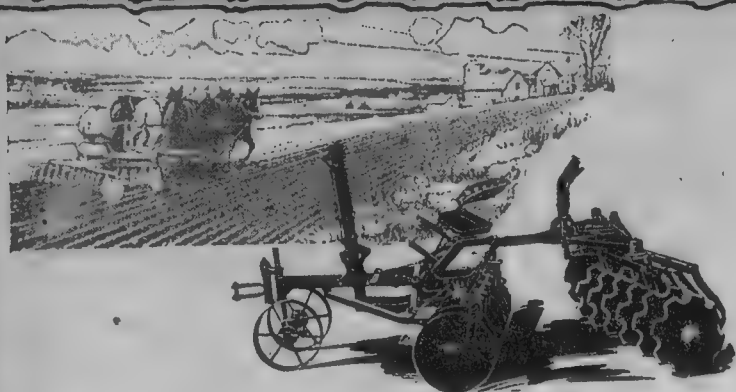
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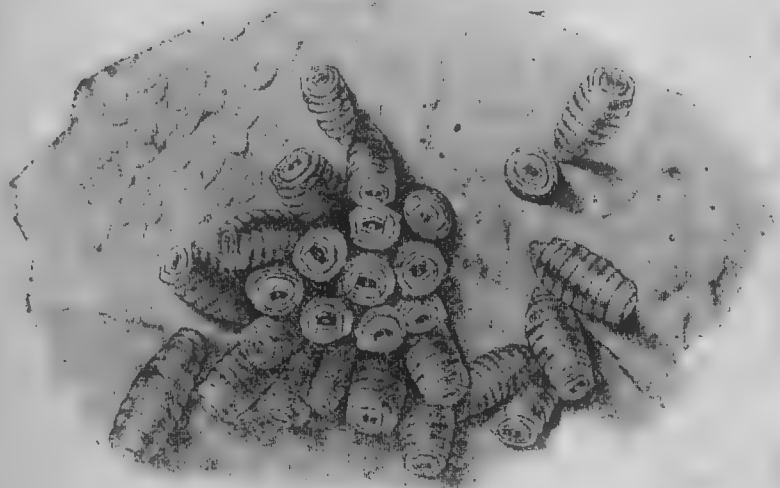
The dealer who sells **Deering** disks also sells **International** peg and spring-tooth harrows, No. 2 cultivators for keeping fallow land free from weeds, and **International** land packers. See him, or write for complete information.

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Photograph and Condition of a Horse's Stomach.

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**Farmers' Vet. Supply Co.**  
Box 276 J. S. Johnson, Bismarck, N. Dak.

## The First Great Harvest

Continued from Page 15

Canada is one of the richest countries in the world in the matter of forest assets. The total quantity of her merchantable saw timber has been conservatively estimated at 800,000,000,000 feet, covering an area of 250,000,000 acres. The pulp wood wealth of the Dominion is believed to be a billion cords, spread over 350,000 square miles of territory. It is quite possible, however, to draw a definite division between saw timber and pulp wood as the same standard may be used for either one or the other. This is particularly true with respect to the spruce forests of the eastern provinces and of British Columbia. While authentic data regarding the output of Canadian saw mills for 1918 is not yet available, the figures for 1917 are interesting and show that the total cut of lumber in the Dominion in that year was 4,142,711,000 feet, of the value of \$83,547,322. This probably represents about 75 per cent. of the normal production in the days before the war. The principal kinds of lumber sawn were: spruce, 1,466,558,000 feet, b.m.; white pine, 791,609,000 feet, b.m.; Douglas fir, 706,996,000 feet, b.m.; hemlock, 322,722,000 feet, b.m.; cedar, 149,999,000 feet, b.m.; red pine, 119,321,000 feet, b.m.; balsam fir, 102,373,000 feet b.m.; and all other varieties, including custom sawn lumber 483,133,000 feet.

There is invested in the great timber industry, including land, buildings, plants, equipment, stocks in process and supplies and working capital no less than \$149,266,019. The number of men engaged in logging operations in 1917 was 25,516, and in mills 28,820, while their combined wages amounted to \$34,412,411. The aggregate value of production was \$115,777,130, which covered 29 kinds of lumber, 11 shingles, ten lath, six pulp wood and ten miscellaneous products, including cooperage stock, veneer, ties, poles, posts, dressed lumber, etc. There are some 2,879 concerns operating in Canada, which embrace saw mills, planing mills, pulp wood plants, shingle mills, lath mills, etc. British Columbia has 50,000,000 acres of commercial timber, the three prairie provinces 11,000,000, Ontario 70,000,000, Quebec 100,000,000, New Brunswick 9,000,000 and Nova Scotia 5,000,000 acres.

### Prospect of Large Export Trade

The eyes of the industry at the present juncture are on the export trade. British Columbia is right to the fore in this enterprising step, and some months ago sent L. B. Beale to Great Britain as lumber commissioner for that province. Previous to his departure last fall he investigated conditions in Ontario and Quebec as well as the Maritime provinces and reported that they would eventually use a quarter billion feet annually of all grades from box shooks to clears, timber and finish. He believes that competitive woods from eastern Canada and the south will steadily decline in volume and quality and that British Columbia will in a few years be the main source of supply and that B.C. lumber is on the market to stay if the mills supply the material desired and in the shape that it is wanted. The white pine manufacturers of Ontario are also taking action to conduct an extensive propaganda campaign in Great Britain with the object of increasing the business, not only in standard lines but also to take in other thickness, sizes and grades which are produced by the mills of the province. A capable and aggressive representative is being sent abroad with this purpose in view and good results are expected to accrue.

In Great Britain, in addition to

ordinary house building and general constructional work, there is a big demand for Canadian timber for pit props, for which the requisition is enormous. Railway sleepers are also needed by the million as well as heavy timber. The market for Canadian hardwood will be limited with the exception of birch.

### Reforestation of Non-Agricultural Lands

In all the provinces of the Dominion there is going on an extensive system of reforestation, which is making great progress, particularly during recent years.

In Ontario forestry reforms have made great progress and about \$500,000,000 a year is expended on the work under the direction of the provincial forester, who maintains a staff of 1,000 fire rangers during the fire season. In Quebec forest protection is handled by co-operative fire protection associations of limit holders and excellent results have ensued, but in neither province has protection yet been made for the reduction of the fire hazard through the enforced disposal of logging slash on timber lands.

The planting of the prairies goes on encouragingly, and as an instance last year, on the 160-acre forest-tree nursery near Saskatoon, there were forwarded to farmers in Saskatchewan 500,000 trees. Two years ago 3,000,000 were shipped out. The trees are taken up in the fall and shipped in the spring.

Another mark of progress during the year was the establishment at Vancouver of a Forest Products Laboratory, where valued timber tests are now conducted. One of the important woods to be tested is white spruce, and it is estimated that the stand in B.C. is 58,000,000,000 feet. The stand of Sitka spruce available on the coast is about 14,000,000,000 feet and this material was largely used during the war in aeroplane construction. Mature trees average 150 feet in height and about four feet in diameter. Between 3,000 and 4,000 men were engaged for many months in the industry in the logging camps and mills under the aeronautical branch of the Imperial Munitions Board. Its suitability for aeroplane construction is due to the fact that it possesses elasticity and toughness of fibre, more perhaps than actual strength. While Douglas fir is a stronger wood it is more brittle. Sitka spruce will take a lateral strain without breaking better than almost any other wood, owing to the length of its fibre.

### Wooden Shipbuilding Revived

Another impetus given a once great industry in Canada by the war was wooden shipbuilding. In the Maritime provinces and in Vancouver, as well as along the banks of the St. Lawrence, the scenes of many years ago were revived, and what had been a lost art was called again into action. Much western lumber was used in the industry and some 200 firms engaged in the business. There were ten in New Brunswick, 120 in Nova Scotia, 22 in Quebec and 28 in British Columbia, with a few scattered in Prince Edward Island, Newfoundland and elsewhere. In Nova Scotia particularly the wooden ship came into prominence. The type of vessel ranged from 200 to 1,000 tons, a number being fitted with oil engines. It is likely that the industry will be kept going for a year or two at any rate. A number of the wooden vessels in the East were built for Canadian private owners. There were, during 1918, some 46 wooden ships launched for the Imperial Munitions Board. Shipbuilding activities aggregated 141,680 tonnage, while contracts were secured from several of the Allied countries.



A Cedar Forest in British Columbia.

# The Mining Industry

Continued from Page 14

the companies have cost many millions. In spite of the necessary heavy expenditures, however, the profits have in recent years been very large, and it was not surprising that the company has been called upon to set aside large sums for war taxes. During the war several million dollars have been expended in Canada to build refineries to treat the nickel-copper ores.

In Quebec the asbestos mining industry is flourishing, the demand in recent years being exceptionally good. Quebec is the world's chief source of asbestos, and consequently is benefitting by the numerous new uses which are being found for this heat-resisting material. The backbone of Quebec mineral production is formed by non-metallic substances—*asbestos, mica, magnesite, pyrites* for sulphuric acid, and a very varied assortment of structural materials. The prominent part which the latter plays in the mineral production of the province is indicated by the fact that in pre-war times (in 1913), in a total value of a little over \$13,000,000, the building materials accounted for 62 per cent, the metallic substance for three and a half per cent. only, the balance (34½ per cent.) being made up of non-metallic minerals, such as *asbestos, mica, graphite and magnesite*. The effect of the war on Quebec's mining industry has been most marked, for in 1917 and 1918 the above proportions were greatly altered, and they now stand about as follows: Building materials, 33 per cent.; metallic ores, 12 per cent.; non-metallic minerals, 55 per cent; the total production of all of which amounted to \$16,266,000 in 1917. Figures for 1918 are not yet available, but it is likely that the total value will exceed \$17,000,000.

## The Gold of Northern Ontario

Great progress is expected to be made this year in the now well established gold-mining industry of Northern Ontario. There has been a great demand for gold during the war, but the selling price did not rise with the cost of production, and conditions were becoming such that few gold mines could be profitably operated. In spite of difficulties encountered, however, progress was made during the war and a great expansion will soon be possible. There can be little doubt that for many years gold mines of Northern Ontario will pour out millions of new wealth. Big gold mines employ many men and represent very large investments for plant and development work. The dividends paid do not tell the whole story. Millions are spent annually for labor, supplies, ma-



Copper Converters In Action.

chinery, etc. Around the mines a new community grows and makes a new market for farmers and merchants. Eventually the development of the mines is followed by agricultural development of the surrounding country. Some of the mines will be doubtless worked profitably for many years, and when their end comes the country will have been well tested by settlers who have had unusual transportation facilities and a close market provided by the mining industry. Mines, like railroads, are responsible for much of the agricultural development of our country.

Despite the great economic strain caused by the world war, the gold mines of Northern Ontario during 1918 have been able to increase their output over that of 1917. While it is yet too early to know what the exact amount will be, it is nevertheless certain that a production of at least \$9,168,000 will be recorded. This compares with a total of \$8,698,831 during the year 1917, an increase of more than \$500,000. Such an achievement, with over half the gold mines closed down, is considered extremely important, so much so that interest in gold properties, both prospective and proven, has been recently growing rapidly.

## The Cobalt Silver Mines

Most of the readers of this journal have heard of the riches of Cobalt, Canada's wonderful silver-mining camp. How many realize what those who developed the Cobalt silver mines have done for us? In the first place the Cobalt mines have to their credit a production of 292,724,172 ounces silver, valued at \$169,370,559, since work was begun in 1904, following the discoveries, in 1903, by men who were engaged in the building of the Ontario government railway. Strangely enough the railway, built to open up the clay

belt further north, has derived its chief revenue from the silver mines for whose discovery its construction is properly attributed. For men and materials must be carried to and from the mines, and thus the railroads benefit when a new district is opened up.

Of the receipts for the sale of silver, about one-half, or about \$85,000,000, has been profit. The other half went chiefly for labor and supplies. The industry has not only been profitable to the mining companies, but has given employment, at good wages, for thousands of men, and has been a new market for machinery and supplies. Millions have gone to manufacturers and



Glimpses of Mining Activities.

Upper: Jasper Park Collieries, Yellowhead Pass. Middle: Milling plant for gold ore at Hollinger Mine, Porcupine, Ont. Lower: Hydraulic prospector at work to uncover silver veins, Cobalt, Ont.



Hauling 400 Bushels of Wheat to Windthorst, Sask., with a Sawyer-Massey 11-22 Kerosene-Burning Tractor.

## SAWYER-MASSEY Canadian Built Kerosene-Burning Tractors

Standardized Tractors of the same general appearance and design, in four sizes: 11-22, 17-34, 20-40 and 25-50 horse power. All are equipped with four-cylinder kerosene-burning motors, two-speed gearing, spring-mounted brass-tube radiators, high-tension ignition with impulse starter (no batteries). One of the features of these tractors is the almost total absence of vibration, which means that the tractors are not hard on themselves, do not shake loose but furnish a steady stream of power to draw-bar or belt without jerk, jar, or vibration.

### Read This Letter from an Owner:

Abernethy, Sask.,  
December 1, 1918.

Sawyer-Massey Co., Limited,  
Regina, Sask.

Dear Sir: I purchased from you an 11-22 Tractor (kerosene burner) and a 22x36 Separator, and have run the outfit two seasons. I am more than pleased with it. In the spring of 1918 I used the tractor to pull a four-furrow disc plow in stubble and it handled it easily. I threshed with the outfit this fall, and, during a run of 26 days, I did not have a break to stop work. The engine runs well on kerosene, having ample power. I averaged 840 bushels of wheat for 21½ days, and for four-and-a-half of oats I averaged 1,783 bushels. The separator cleans the grain well and saves the grain well. I would not trade same for any outfit of same size I have ever seen.

Yours truly,  
(Signed) THOMAS BURTON.

In addition to Kerosene-Burning Tractors, we manufacture Steam Plowing and Threshing Engines, Road Machinery, and a complete range of Grain Threshers. Fill in the Coupon below for free literature.

## SAWYER-MASSEY CO. LIMITED

Head Office and Factory: HAMILTON, ONTARIO

BRANCH OFFICE AND WAREHOUSES:

Winnipeg Regina Saskatoon Calgary

### REQUEST FOR FREE INFORMATION COUPON

(Mail to nearest Sawyer-Massey Branch)

Kindly place my name on your mailing list to receive free 1919 literature, covering the machinery which I have marked with an X below.

.....11-22 Kerosene-Burning Tractors.	.....Individual Threshers.
.....17-34 Kerosene-Burning Tractors.	.....Large Custom Threshers.
.....20-40 and 25-50 Kerosene-Burning Tractors.	.....Combination Threshers.
.....Steam Engines.	.....Road Machinery.

NAME .....

ADDRESS .....

DATE .....



# Unity-Stability-Prosperity

are the aims of the

## Canadian Reconstruction Association

### Industrial Stability

is essential to

### Agricultural Prosperity

Farm and factory are linked in a national economic chain. Without the agricultural West there would be diminished markets for manufactured products, unemployment, and national depression. Without the industrial East prices for farm produce would decline, agriculture could not flourish, and "hard-times" would follow. During the war, agriculture and industry have prospered. During the reconstruction period, it is imperative that there should be no rash change in economic policy. Tariff uncertainty is already retarding the readaption of industry to peace conditions. Any revolutionary change in fiscal policy will produce industrial depression. With industrial depression, there will be diminished markets for agricultural produce, low prices for food-stuffs, and hard times for the farmer.

**The Canadian Reconstruction Association urges  
A NATIONAL POLICY IN THE NATIONAL INTEREST**

#### EXECUTIVE

Rt. Hon. Lord Shaughnessy, K.C.V.O. Sir John Willison, C. H. Godfrey, Montreal, W. K. George, Toronto,  
Honorary President President Vice-Presidents W. J. Bulman, Winnipeg

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#### WESTERN COMMITTEE

310-11 Electric Railway Chambers, Winnipeg

#### HEAD OFFICE

Royal Bank Bldg., Toronto

#### EASTERN COMMITTEE

603-4 Drummond Bldg., Montreal

merchants as well as to the workmen.

As for the future, with metal authorities predicting a continued high price of silver for several years, Cobalt's prosperity is expected to increase during the post-war era. The reasons are several. Chief among them is the fact that abundant labor will be available, and that the cost of supplies will decline. Indeed, there is already evidence of the commencement of this expected decline in costs. In recording the foregoing statement, that Cobalt's prosperity is expected to increase during the post-war era, it would, perhaps, be well to point out that such is not meant to convey the belief that the output of silver will increase. Quite to the contrary, there may reasonably be expected a decrease in output from year to year, but so slight, especially with silver at the present price, as to convey no threat to the profitable existence of the mines for a great many years.

One of the most active companies operating in British Columbia is the Consolidated Mining and Smelting Company of Canada. This company is a big producer of gold, copper, lead and zinc. It operates the smelter at Trail.

Another company operating on a big scale in British Columbia is the Granby Consolidated Mining and Smelting Company. This company produces over 3,000,000 pounds copper each month. To do so it necessarily employs a large force of men and purchases huge quantities of supplies and machinery. The men must be fed, and the farmer benefits, not only directly by this market, but indirectly by the needs of the manufacturers and merchants who supply the materials used by the mining company.

British Columbia is also a very important producer of coal. Its mines are producing about 200,000 tons per month. Necessarily several thousand men are employed by the coal mining companies, and many million dollars have been invested in plant and in development work.

I have not attempted in this article to present an exhaustive survey of the mining industry of Canada. I have perhaps said enough to indicate that mining is already an important industry in the country. Those who have been impressed by the stream of grain-laden cars coming eastward, and consider what the railways owe to the grain growers, will probably be surprised when I add, for it is a fact, that by far the largest contribution to the railways of North America is made by the mining companies. Over one-third of all the freight carried by railroads is mine products. Statistics are not available to give the distance the products are hauled, but it is known that the freight to railroads by the mines is as stated.

While we have good reason for stating that the mining industry is well established in Canada, that production is increasing steadily and capable men are in charge of most of the operations, we should not be satisfied with the progress we are making. Our mineral resources become valuable only when they are used. Undiscovered ore is of no value, and undeveloped deposits are of little value. We should endeavor to speed up the work of the prospector and assist those who undertake the developing of properties in new districts. Only by the expenditure of labor and capital do mineral deposits become of use. For one prospect that becomes a profitable mine there are many that prove worthless. Those who provide funds for development work recognize that they run a good chance of losing their money. The experienced operators do not expect that many of their ventures will be profitable. They have a right, however, to expect that their successful ventures should prove very profitable. It is the hope of winning one of the rich prizes that leads men to seek mineral wealth in the wilderness. The whole country benefits from their work. It is in the interests of Canadians that development of our mineral resources be speeded up, that prospectors should be encouraged, that the Mines Departments should be authorized to extend their work. More attention should be given by farmers and manufacturers to this matter, with the view to obtaining a larger market in Canada for their products.

# Tobacco Production in Canada

*A New Development in Her Agriculture—By C. S. Richardson*

**W**HAT would the world do without its tobacco? This is a question that in the last four years and a half has been asked more frequently by all classes and conditions of people than at any time since it was introduced to the white races by Drake and Raleigh, more than 300 years ago. The world-war is the first in history to have been fought on tobacco, and its recognition by the warring powers as a ration has done more to establish it in the minds of the peoples of the world as a necessity and not a luxury than anything which has occurred since the Elizabethan adventurers found the natives of the New World enjoying the soothing influences of nicotine and took back to Europe the delectable weed which is now used 'round the entire world.

Canada is a comparatively young nation and a comparatively small one, yet the importance of tobacco in this Dominion is a fair sample of its place in the commerce and development of the world. Tobacco made possible to no small extent the civilization of the North American continent. How many thousands of acres passed from the hands of the Red men for "sticks" of tobacco may never be computed. But just as the tobacco of the fur trader and the colonizer opened up new territories and new possessions, so is tobacco today opening up new possibilities in the extension of the Dominion both in the manufacturing sense and the agricultural sense. For Canada is a tobacco-producing country that is fast developing.

Rough estimates of the tobacco industry in this country show that something between \$150,000,000 and \$200,000,000 is represented by the manufacturing end of the business. By manufacturing, we include cigar, cigarette and tobacco factories, as well as the production of snuff, which is developing rapidly through its more general use as a chewing tobacco and not in the old-time form of the snuff-box.

The revenue derived from tobacco by the Federal government may be shown by a glance at the Inland Revenue Department figures for the last month of 1918—December—when a little more than \$3,000,000 was added by this department to the Canadian treasury, exclusive of the special war tax levies which represented another odd \$900,000. Of the regular Inland Revenue levies roughly two-thirds were contributed by tobacco and cigars, the total from this source being close to \$2,000,000.

While the Canadian smoker put close to \$25,000,000 in the pockets of the government last year—in the shape of taxes—the Canadian farmer pocketed around \$5,000,000 as his share of the tobacco development of Canada. In the Hurley and Virginia flue-cured districts of Ontario—situated in the Essex-Kent section of the south-western peninsula of the province—more than 8,000,000 pounds of tobacco were raised and sold, the price for the Hurley ranging from 30 to 37 cents per pound, and the Virginia flue-cured from 43 to 55 cents. Here we have some 6,500 acres producing a crop worth around \$3,000,000, while in Quebec another 6,000 acres produced about 7,000,000 pounds which sold from 20 cents a pound up.

Home Consumption 30,000,000 Lbs.

The possibilities of the Canadian tobacco production are vast. This country annually consumes some 30,000,000 pounds in one form or another and produces on an average considerably less than half that amount. For instance, in the eight months period ending December 1 of last year, we brought in 16,321,301 pounds of raw leaf, the value of which was placed at \$6,651,117 by the Inland Revenue Department.

In the same period we paid United States just \$6,679,164 for raw leaf and manufactured tobacco, cigarettes and cigars that were brought into the Dominion from the land of Uncle Sam. Our raw leaf imports have been steadily advancing for the past few years. In 1916—for the eight months period—we brought in 11,665,806 pounds with a value of \$3,151,309. The next year (1917) the value had jumped to \$3,985,085 for 12,134,457 pounds. The increase in the past year is most apparent.

Development of Canada's export trade in tobacco products is responsible in no small measure for the increased consumption of leaf. Whether this export trade can be held after the war conditions are altered, remains to be seen and depends largely on the action taken by the government to reduce certain restrictions which make exporting almost prohibitive under normal conditions. The demand of tobacco for the troops in the fighting areas and the shortage of smokes for the British civilian population created a market that established for Canada a wonderful tobacco trade. In cigarettes alone the increase has been almost ten times since 1916. In that year, from the beginning of the fiscal year on April 1, up to November 1, we exported 151,703,000 cigarettes with a value of \$298,154. The next year the totals were 314,043,000 and \$766,338, while last year they soared to 829,704,000 and \$2,841,996. The United Kingdom took \$1,787,875 worth; United States only \$80, while the remaining \$1,054,291 went principally to France. During the month of November we shipped more than \$537,000 worth of cigarettes in our export trade.

If all this export trade could be retained it would mean a tremendous impetus to the manufacturing end in this country but it seems only reasonable to expect that it will drop back as soon as the Old Country factories are able to resume normal operations. Amended revenue restrictions would, undoubtedly, help to keep up the trade, but whether these will be introduced or not remains to be seen.

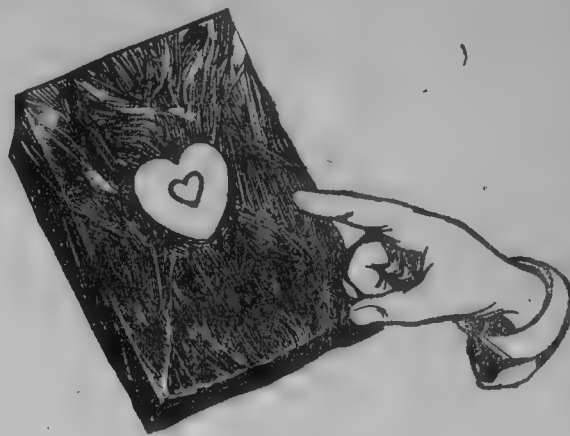
## Tobacco Culture in Canada

Speaking of the agricultural end again—the development of Canada's natural resources in the way of tobacco culture—it might be mentioned that there are those optimists who feel assured that Canada has a chance to supply a big portion of the 160,000,000 pounds of tobacco which is imported into England each year. The prevailing high prices of leaf and the general world shortage, coupled with the duties of 40 and 60 cents a pound—for unstemmed and stemmed tobacco respectively—now in force in this country, mean a big market for the Canadian producer, and the Canadian producer is being added to daily. The tobacco districts of the country are widely scattered. Quebec, Ontario and British Columbia are the centres.

In Denmark, tobacco has been successfully produced north of latitude 55, and, therefore, it may be that we will see tobacco raised in the west at some not distant date. However, tobacco is undoubtedly destined to play an important part in the agricultural development of Canada.

If we are to participate in the 160,000,000 pound market of the mother country we will have to change our present types of tobacco, for the Old Country is a user of the Virginia or bright leaf types. More than 1,000,000 pounds of this type are now grown in Ontario annually, and cured in the specially constructed flue barns, the curing process being kiln drying. Better curing for all types of Canadian leaf is needed if we are to make a bid for export business.

Quebec grows largely cigar leaf, both of the filler and the binder type, and experts declare that it compares favorably with the Wisconsin crop, for example, although in the Wisconsin crop there is a much higher percentage of binder leaf than in Quebec. British Columbia and the Kelowna district of that province may be Canada's future cigar-leaf producer, for leaf grown there is considered the equal of any on the North American continent. Naturally we, as Canadians, have not got the "hang" of tobacco raising as they have it in the states, where for hundreds of years now the culture has been handed down from father to son. Schemes for government assistance to the growers in a far greater measure than that now accorded are being worked out and in the next decade we may well see Canada well to the fore in tobacco raising. The fact that in 1918 one of the largest Canadian tobacco firms entered the Canadian leaf market for the first time in its history



**T**HE heart-shaped seal on the plug represents real quality in the plug. Every plug of Macdonald Tobacco—chewing or smoking—carries the "heart" trade mark.

## MACDONALD'S 'BRIER'

Plug Smoking

The smoking tobacco that has kept its leadership for the past thirty-five years. The popular favorite among Western farmers—they all smoke Macdonald's.

## MACDONALD'S 'PRINCE of WALES'

Plug Chewing

A real good chew—the plug they all chew when they are particular. A leader since 1859.

To be sure of quality, see that your smoking and chewing tobaccos bear the Macdonald Trade Mark—the heart. At all dealers everywhere.

## W. C. Macdonald Reg'd

Manufacturers of tobacco for over 60 years.

MONTREAL, Canada.



# Standard Bank of Canada

The Forty-fourth Annual Meeting of the Shareholders of The Standard Bank was held at the Head Office, 15 King Street West, on Wednesday, the 26th February. A large number of shareholders was present.

The chair was occupied by the President, Mr. Wellington Francis, K.C., and Mr. E. A. Bog, Chief Inspector, acted as Secretary to the meeting and read the following report:

In presenting the Forty-fourth Annual Report and Statement of the affairs of the Bank for the year ending 31st January, 1919, your Directors have pleasure in stating that the results for that period have been satisfactory.

The Net Earnings amount to \$697,448.71, after provision has been made for the bad and doubtful debts, interest on deposits, rebate on current bills under discount, provincial taxes, and cost of management. This amount, added to the balance of Profit and Loss Account, \$175,215.82, brought forward from last year, together with \$46,710 for premium on new stock issued, makes the sum of \$919,369.53.

This has been appropriated as follows:—  
Four quarterly dividends at the rate of 18 per cent. per annum.....\$458,892.99  
Contributed to Officers' Pension Fund.....20,000.00  
Contributed to Patriotic and kindred funds.....36,600.00  
War Tax on Bank Note Circulation to 31st December, 1918.....34,839.64  
Premium on new stock.....46,710.00  
Reduction of Bank Premises' Account.....100,000.00  
Balance of Profit and Loss Account carried forward.....227,326.90  
\$919,369.53

Your Directors record with deep regret, the death, in October last, of our late President, Mr. William F. Cowan, who had been closely associated with this Bank for the past 43 years, occupying the position of Vice-president from 1875 to 1888; and President from 1888 to 1918. The valuable services rendered by Mr. Cowan during that time have materially contributed to the growth and development of the Bank. The vacancy caused by Mr. Cowan's death has been filled by the election of Mr. Wellington Francis, K.C., who has been a Director of the Bank since 1902, holding the office of Vice-president since 1918.

Mr. Herbert Langlois has been elected Vice-president.

During the year, Branches and Sub-branches have been opened at Bindloss, Alta.; Bon Accord, Alta.; Coaldale, Alta.; Parkland, Alta.; Raymond, Alta.; Stirling, Alta. (sub. to New Dayton); Wayne, Alta.; Paynton, Sask. (sub. to Malsdale); Gray, Sask. (sub. to Regina); Ashern, Man. (sub. to Eriksdale); Eriksdale, Man.; and Goodwood, Ont. (sub. to Stouffville).

The Branch at Paisley, Ont., was closed.

The usual inspection of the Head Office and Branches has been made, and the duties of the staff have been faithfully and efficiently performed.

The regular audit of the Bank's affairs has been made by Mr. G. T. Clarkson, C.A., and his report is appended herewith. Mr. Clarkson's name will be again submitted at the Annual Meeting for re-appointment as Auditor for the ensuing year.

WELLINGTON FRANCIS, President.

Toronto, 31st January, 1919.

## GENERAL STATEMENT

31st January, 1919.

### LIABILITIES

Notes of the Bank in circulation.....	\$ 6,697,858.00
Deposits bearing interest (including interest accrued to date).....	\$42,568,695.61
Deposits not bearing interest.....	28,405,862.81
Dividend No. 118, payable 1st February, 1919.....	65,969,558.42
Former dividends unclaimed.....	118,750.00
Balances due to other Banks in Canada.....	61.75
Balances due to Banks and Banking Correspondents elsewhere than in Canada.....	1,227,161.45
Acceptances under Letters of Credit.....	1,148,889.61
Capital paid up.....	272,259.17
Reserve Fund.....	8,500,000.00
Balance of Profit and Loss Account carried forward.....	4,500,000.00
	227,326.90
	\$83,656,865.80

### ASSETS

Current coin held by Bank.....	\$ 1,772,059.84
Dominion Notes held.....	10,812,621.00
Deposits in the Central Gold Reserves.....	8,500,000.00
Notes of other Banks.....	\$ 362,061.00
Cheques on other Banks.....	2,597,090.27
Balances due by Banks and Banking Correspondents elsewhere than in Canada.....	1,487,311.78
Dominion and Provincial Government Securities not exceeding market value.....	4,521,486.89
Canadian Municipal Securities and British, foreign and colonial public securities other than Canada.....	8,478,705.87
Railway and other bonds, debentures and stocks not exceeding market value.....	357,278.01
Call and Short (not exceeding 90 days) Loans in Canada on bonds, debentures and stocks.....	1,782,828.08
	19,981,656.30
Other Current Loans and Discounts in Canada (less rebate of interest).....	\$86,066,887.14
Liabilities of Customers under Letters of Credit as per contra.....	\$45,598,854.18
Real Estate other than Bank Premises.....	272,259.17
Overdue Debts, estimated loss provided for.....	7,770.56
Bank Premises, at not more than cost, less amounts written off.....	64,699.92
Deposits with the Minister for the purposes of the Circulation Fund.....	1,846,556.65
Other Assets not included in the foregoing.....	175,000.00
	180,387.73
	\$83,656,865.80

W. FRANCIS, President.

C. H. EASSON, General Manager.

### AUDITOR'S REPORT TO THE SHAREHOLDERS

I have compared the above Balance Sheet with the books and accounts at the chief office of The Standard Bank of Canada, and the certified returns received from its Branches, and after checking the cash and verifying the securities at the chief office and certain of the principal Branches on 31st January, 1919, I certify that in my opinion, such Balance Sheet exhibits a true and correct view of the state of the Bank's affairs according to the best of my information, the explanations given to me, and as shown by the books of the Bank.

In addition to the examination mentioned, the cash and securities at the chief office, and certain of the principal Branches were checked and verified by me at another time during the year, and found to be in accord with the books of the Bank.

All information and explanations required have been given to me, and all transactions of the Bank which have come under my notice have, in my opinion, been within the powers of the Bank.

G. T. CLARKSON, F.C.A., of Clarkson, Gordon & Dilworth, Toronto, Canada.

Toronto, 15th February, 1919.

The President addressed the meeting and the General Manager reviewed the Statement, after which the usual motions were passed, and the scrutineers appointed, reported the following Directors elected for the ensuing year: Wellington Francis, K.C., W. F. Allen, H. Langlois, F. W. Cowan, T. H. Wood, James Hardy, T. B. Greening.

At a subsequent meeting of the Directors, Mr. Wellington Francis, K.C., was elected President, and Mr. H. Langlois, Vice-president.

C. H. EASSON, General Manager.

## The Grain Growers' Guide

is an indication of the possibilities ahead of the raising of tobacco.

### An Unusual Plant

Tobacco, from the agricultural standpoint as well as any other, is totally unlike anything else in the world. It is the only plant that grows from the ground which is taxed the world over, and tobacco is the only thing raised from the soil which can show such wide differences. Given identical growing conditions, identical soil and identical care, two fields of tobacco will show a far greater difference than any grain or soil product known to mankind. Tobacco costs, it is figured, around four cents a pound to raise in normal conditions. War conditions have increased that of course, but it is estimated that in Ontario this past year that eight cents a pound was the very highest that the farmer paid for his growing. This shows what a handsome profit can be made from the leaf.

Development of the home market will keep up prices, as we have said, but it is very doubtful whether the levels of 1918 will ever be reached again. However, the farmer who can grow 2,000 or even 1,500 pounds of tobacco to the acre at 20 cents a pound will be content, and that figure seems to be the one at which the leaf of the Canadian fields will sell this year.

### The Domestic Tobacco Market

Now a word as to the Canadian domestic market. Although the comparison of the fiscal years 1917-18 and 1918-19 to date show a falling off in the domestic consumption of cigarettes, as shown by the monthly statements of the Department of Customs and Inland

Revenue, the calendar year 1918 was the greatest in history for the production of cigarettes for domestic trade. For the year, 58,245,475 more cigarettes were entered for domestic trade than in 1917. In over-weight cigarettes there was 1,546,590 as against 1,295,840 in 1917. Cigars dropped off by 18,380,368 there having been 225,471,121 entered in 1918 as against 243,851,689 the year before. Tobacco also showed a falling off of 266,832 pounds, the 1918 total being but 20,239,896 pounds. Raw leaf entered for consumption almost made up the difference in tobacco, for it increased from 18,007,599 to 18,270,365 pounds.

One of the reasons for the falling off of domestic trade last year is the army. Thousands of smokers were added to the C.E.F. strength and were therefore privileged to buy their tobacco at the canteens and minus the stamp duty. In eight months up to December 1, the canteens of Canada took more than 153,000,000 cigarettes; 140,000 pounds of tobacco and 1,000 pounds of snuff. This explains the drop of more than 20,000,000 cigarettes in the nine months of the fiscal year to December 31, 1918, and the drop in tobacco shown in the calendar year 1918.

The fact that tobacco exports in eight months increased from \$41,129, in 1916 to \$385,778, in 1918, shows that the Canadian tobacco followed the boys overseas, and consequently, could not be shown on the domestic consumption figures at home.

In the manufacturing end, and in the growing end of the tobacco industry, Canada today faces the greatest possibilities in its history.

## Canada—The World's Papermaker

Continued from Page 16

particularly from the United States. At the present time the account of the people of Canada with the people of the United States shows an excess of imports over exports of \$220,574,402 for merchandise only during the nine months to December, 1918. The effect of this on every-day business transactions, from the payment of a magazine subscription or premium on an insurance policy to the purchase of a threshing machine or flour-mill equipment,

### Exports of Pulpwood, Pulp and Paper for Fiscal Years 1918

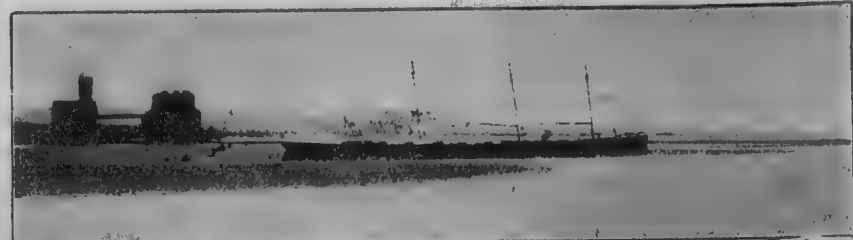
	1916	1917	(7 months)
Paper, and manufactures of.....	\$13,272,977	\$20,912,832	\$25,538,881
Pulp, chemically prepared.....	7,264,142	11,455,040	18,817,444
Pulp, mechanically ground.....	3,219,440	4,524,581	2,908,275
	\$23,756,559	\$36,892,453	\$47,264,600
Pulpwood, unmanufactured.....	4,624,033	5,478,900	9,980,535
	\$28,380,592	\$42,371,353	\$57,245,135

ment, is felt in some degree by every Canadian. The paper mills, which buzz and clatter day and night, are busily trying to pay off this mortgage on Canadian industry; \$100,000,000 is a lot of money, but that is the value, at the present rate, of pulp and paper exported by the mills of Canada every year, and this will go a long way toward offsetting our adverse trade balance, in fact it helped our position by \$200,000 every day of the year.

This is a proper place to notice that 15 Canadian companies, making newsprint, produced 752,000 tons in 1918, (some of them operating only a part of the year), as compared with 589,751 tons in 1917, an average daily increase of about 500 tons. The excellent condition of the mills and the ability of their management is shown by the fact that they produced 97.7 per cent. of their maximum capacity. Of the total production of newsprint the United States took over 690,000 tons, valued at more than \$34,000,000, and considerable quantities were shipped to Australia and other foreign markets. Canada's export trade in wood pulp is already large and is growing rapidly. Much of the pulp made in the Dominion is further converted to paper and

Neutral and enemy countries have suffered serious losses of trade in paper and pulp, and what is more important to us is that the kinds in which they had the largest dealings are the very ones that can best be supplied by Canadian mills. Much of the trade offered during the war could not be accepted because of shipping difficulties, but a considerable amount of our products found their way to new markets, and it is altogether likely that many former customers of Scandinavian, German and Austrian mills have found that Canada has the goods and will continue to trade with us. Our export horizon includes South America, South Africa, Australia, India, the Orient, to some extent Great Britain and Southern Europe, and especially the United States. The spread of education is extending the demand for paper for newspapers, books and correspondence material. With a far-sighted policy and capable management of mills, the pulp and paper industry of Canada has a most promising future, and can be relied on to hold the premier position among the manufacturing industries of the Dominion.

While paper has been substituted for many things, no substitute has been found for paper.



Loading Lake Vessel with Pulpwood for Export at Port Arthur.

## Manufacture of Furniture

Canadians Buying Higher Grades—

By A. E. Uren

THE furniture industry has contributed in no small way in making the Canadian home what it is today—the country's greatest institution. From a dollars and cents consideration and the position occupied in the industrial life of the Dominion, the industry holds, as well, an enviable position.

It is especially encouraging to note the marked tendency on the part of the public to buy better furniture. The day of cheap furniture is fairly well over. National prosperity has enabled people to furnish their homes better and to substitute more serviceable pieces for the cheaply made articles which formerly had a place in the homes of the working class. Both retailer and manufacturer are now able to concentrate on the better class, on which the profit is more certain, and to eliminate the cheap lines which were not only unserviceable but a very doubtful source of profit.

A look over the various catalogs of the leading furniture manufacturers of Canada, and a comparison with those of foreign manufacturers show that the productions here are equal to the best of the standard lines made anywhere in the world. During the past ten or 12 years there has been a very marked advance in styles, finishes and construction. The general public are taking a greater interest in the adaptations of period designs and it is surprising the knowledge that is possessed today by the average holder, on the different styles of furniture.

### Advance of Prices

Prices of the finished furniture have been advancing slowly, but not to the same extent as the prices of raw materials and labor; in fact, so rapidly have manufacturing costs been climbing that no sooner has one set of prices been decided upon than another increase is needed. A thorough analysis made recently of the Canadian furniture manufacturing industry, brought out the fact that the margin of profit has been exceedingly small in proportion to the investment. There are not a few cases where business has been conducted at an actual loss. Since there is no probability of diminution in wages or in cost of materials for some time at least, the prices of furniture, in the very nature of things, will in all probability be increased rather than lessened, and that before very long.

The shortage of lumber and veneers is most pronounced, although practically all materials that enter into the construction of furniture are scarce. The demand from foreign countries for lumber is likely to increase tremendously. Furniture lumber is becoming, as years go by, increasingly scarcer and harder to procure on account of its slow growth. In spite of the large timber areas in Canada and the quantity of lumber that is cut, the furniture industry has, of late years, become more dependent upon the United States for many of the leading furniture woods. Just about all oak used in furniture making is imported. Mahogany, gum, American walnut, Circassian walnut and other high grade furniture woods, each extensively used in furniture making, are all imported. In the meantime, in spite of all that is being done to conserve her forest reserves, Canada will be compelled, of necessity, for a long time to come, to depend on the lumber mills of the United States for a great part of her supplies of suitable furniture woods. While furniture manufacturers are exploiting native hardwoods such as birch, maple, etc., so far their use has been limited.

There are at the present time some 90 factories in Canada engaged in the manufacture of wooden furniture. There are also about 20 plants engaged in the manufacture of metal beds, springs and mattresses on a more or less extensive scale. By furniture is meant those lines exclusive of interior fittings and fixtures, hangings, floor coverings and draperies, household hardware and similar lines rightly classified as household furnishings. There are also small shops to be found in almost every large town and city where cabinet-work,

mattress-making and upholstering is carried on, and where, as a rule, but one or two people are employed.

There is approximately \$15,000,000 invested exclusively in the furniture manufacturing industry of Canada and, according to the Dominion Bureau of Statistics, if to this is added the associated lines referred to, which are also classified by the bureau as house furnishings, this figure reaches over \$30,000,000.

Ontario, with some 70 factories engaged solely in the manufacture of wooden furniture and with a number of bedding plants, is the leading furniture province of Canada. Ontario has several towns and cities each possessing a number of furniture factories, notable among which are Kitchener, Waterloo, Stratford, Hanover, Toronto and Owen Sound. In addition there are at least a couple of dozen towns and cities with one or more flourishing furniture factories. The lines made in the various factories are so comprehensive as to include almost every grade or design in demand. There are some 20 furniture plants located in the province of Quebec, Montreal being the head of the largest bedding organization under the British flag. There are at present two furniture factories in operation in the Maritimes. While there are several bedding factories in Western Canada, as yet very little furniture is being manufactured west of the Great Lakes, although a start is being made in a few places where the distribution so far is largely local.

### Imports Mostly from U.S.

The imports of furniture into Canada for the 12 months ending March, 1918, is placed at \$1,162,874, mostly from the United States. Back in 1913, furniture imports into Canada reached their maximum. At that time they had a value of \$3,177,000. During 1914, there was a slight decline, but they still remained over the \$3,000,000 mark. In 1915, owing to business depression, the import trade dropped to something like \$1,500,000 and 1916 saw it reduced to \$778,000, which was the lowest since 1909 when the value of imports of furniture fell very low. It was in 1911 that the million mark was first crossed.

It is becoming more and more evident that a wide field for the export of furniture is opening up before the Canadian manufacturers. Already active steps have been taken by them in this direction as, at the time of writing, special representatives are being appointed to represent the furniture industry in Europe in order to give active and technical advice promptly so as to assist in securing such orders as Canada can supply. Apart from the opening for furniture provided by France and Belgium, the entire world is short of furniture just now, or at least that part of it which is depending upon imports for its needs.

### Future Holds Good Prospects

Many of the keenest business men associated with the Canadian furniture industry believe that the trade is going to enjoy real healthy expansion in a comparatively short time and that, as far as immediate business is concerned, it will be largely what it is made. The furniture trade of Canada learned to take care of itself probably better during the war years than during the years which preceded. The scarcity of labor and materials brought about economies in production and distribution that actually left it in better shape than at the beginning of the war. Furniture men as a result, appear to be developing a broader spirit and larger outlook both as to methods and aims, for the stupendousness of the war and its effects have certainly not been lost on this business.

The industry is preparing to do its part at this transition period. There is a spirit of optimism everywhere, based on Canada's untold possibilities, her natural resources and the part she will take in re-establishing war-worn Europe. This feeling prevails in the furniture industry to a very marked degree.

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Your home can be made permanently beautiful with Beaver Board. See the Beaver Board dealer near you. Write for our book "Building More Comfort into the Farm Home."

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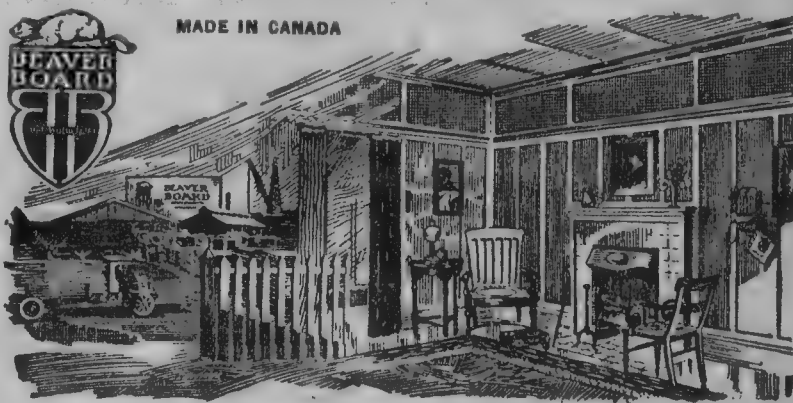
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Observe the tread on Maltese Cross Non-Skid Tires. The area of road contact is a continuous belt of thick, tough rubber. It is a means of reinforcement, giving extra strength, long life and endurance.

Like the keystone of an arch, this girth supports every segment of the tire. Its resistance is sufficient to reduce "flexing" to a minimum; it saves the internal fabrics from the wear of undue friction.

The new, 1919 "continuous tread" on the Maltese Cross Non-Skid Tire is such a real big improvement that we want every motorist, who is keen on long mileage and freedom from tire trouble, to give this new-pattern-tread tire a trial.

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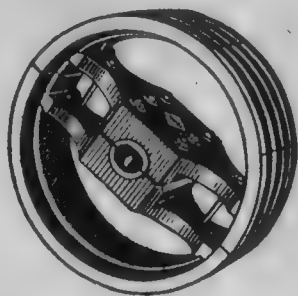
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## Fishing---Canada's Oldest Industry

Continued from Page 17



**SAVES GASOLINE  
SAVES MAN POWER**

**DODGE**

**WOOD-SPLIT PULLEYS**

**Farmers! It will pay you to Investigate  
Dodge Wood-Split Pulleys**

A pulley, a belt and a motor, and a little gasoline will enable you to do many jobs around the farm, mechanically, that would ordinarily use up a lot of man power. But, because, as a farmer, you do not often buy pulleys, and because the life of the pulley is almost everlasting, you want to be sure and get a Dodge Wood-Split Pulley when you do buy. For these reasons:—

Dodge Wood-Split Pulleys cost less than iron or steel pulleys. The Dodge arm and hub construction provides for great compressive force. It is the only wood pulley on the market which is scientifically right at this vital point. The ends of the arms do not project through the face of the pulley. This makes a perfectly even and uniform belt surface of all side-grained wood. Every pulley is machine-nailed.

Moreover, a Dodge Wood-Split Pulley saves gasoline, because the belt doesn't slip as much on a wood pulley as it does on a metal pulley.

The stockers listed below can fill your orders for pulleys for four-inch diameter and upwards right away. Write to firm nearest to you for Price List.

**Dodge Manufacturing Co. Limited**

TORONTO — ONTARIO.

The Stuart Machinery Company Limited, 764 Main Street, Winnipeg, Man.

T. Eaton Co. Limited, Winnipeg.

The A. G. Low Company Limited, Saskatoon, Sask.

Gorman, Olmsted & Grindley Limited, The Big Supply House,  
Edmonton — Calgary, Alberta.  
(Write Nearest Office)

Revillion Wholesale Limited, Edmonton, Alberta.

The A. B. Williams Machinery Company of Vancouver Limited  
Phone High 40. 495 Railway Street.

astonishing range of variety and an indication of the importance of certain fisheries seldom or ever heard of outside of the trade engaged. Many of the species enumerated are due to become of great importance in the future, and in several cases the quantity marketed is caught in the nets or on the hooks of other fisheries. The albacore, or horse-mackerel—the famous tuna of the Mediterranean—is caught by accident in mackerel traps and is not a fishery specially prosecuted. The albacore is a huge fish, averaging from 100 to 400 pounds in weight and of excellent edible quality. There are large numbers of them on our Atlantic coasts, and when the consumer realizes the value of albacore as food, the fishery for albacore will be specially prosecuted.

Soles, flounders, brill and skate are other species which will stand greater development. Recently the Canada Food Board has developed this fishery on the Pacific coast by means of steam trawling, and this Pacific fishery is destined to become one of the most valuable on the west coast. Citizens of the prairie provinces are rapidly becoming familiar with these Pacific flatfish, and a large market is growing. The same applies to the cod-fish of the Pacific—red, grey and ling. Huge quantities of these cods are available, but the fishery for them was never prosecuted until the Food Board developed a market throughout the West. Other fisheries capable of greater development in Canada are the herring, oolachon, pilchard, grayfish, and several species absolutely untouched at present.

Included in our fishery wealth may be mentioned the following by-products and side-industries—the value of which are herewith given:—

Fish tongues and sounds, \$84,635; Caviare, \$15,106; Sturgeon bladders, \$977; Salmon roe, \$7,820; Hair seal-skins, \$71,690; Fur seal-skins, \$6,540; Beluga (white whale) skins, \$682; Whales and whale products, \$82,995; Whale oil, \$342,422; Fish oil, \$397,164; Seal oil, \$83,937; Porpoises, \$56; Sea weed, \$550; Fish offal, \$300.

The values given are not to be taken as an indication of the true wealth of the fishery, but merely shows the extent to which it is prosecuted today. Fish offal, for instance, is valued at \$300. If properly developed and fish offal manufactured into fertilizers, cattle feed, glues and oils, this industry alone is capable of yielding millions of dollars to our fishery wealth. Sea weed is another industry capable of great expansion in making potash and iodine.

**Fishing Equipment and Fishing Methods**

Twenty-six million dollars are invested in Canada's fishing industry, and over 100,000 persons are employed in it wholly or in part.

Two-hundred steam vessels—trawlers, fish tugs, cannery tenders and fish carriers—operate on both oceans and inland waters. Of sailing and gasoline-driven craft there are 1,300, which includes the handsome Bank schooners and the "gas" boats of all our waters. Of smaller craft—those which carry two or three men—there are over 27,000 sail and row-boats and 11,000 motor-boats employed in fishing. In the salmon canning industry of British Columbia, over \$3,000,000 are invested in Cannery plants. Three million dollars are invested in freezers and ice-houses and \$2,250,000 in fishing piers and wharves. The investments in nets, traps, lines, smoke-houses, etc., run into millions.

The methods of fishing practiced in Canada are, in some fisheries, modern, and in others, antiquated, but within the last two or three years a distinct revolution is noticeable and the old-fashioned methods are being done away with. In the off-shore fishery for cod, haddock, pollock, hake and eusk, on the Atlantic, and flatfish and cods on the Pacific, the modern steam trawled is coming to the fore. For many years, the Bank fisheries of the Atlantic was

carried on from sailing schooners, carrying from four to ten dories and from eight to 25 men. From these dories, the fishermen set long lines equipped with hundreds of baited hooks, and the fish caught were taken aboard the schooners, dressed and laid in salt or ice in the vessel's hold. Considerably over 100 schooners are operating in this manner today upon our Atlantic coast, but 1918 saw four modern steam trawlers operating, and they are but the forerunners of a fleet now building. Steam trawling consists, briefly, in dragging a huge poke-shaped net over the sea bottom. At certain intervals the net is hauled on board and the captured fish are dumped on deck, dressed and stowed away on ice in the fish-rooms below. By this method, steam-power is invoked to do most of the work; neither hooks, lines or bait are required; fewer men are employed; fishing can be carried on in practically all weathers, and less time is consumed on the voyage.

Upon the Pacific, three steam trawlers are engaged in catching soles, flounders, brills, plaice, skate, red, grey and ling cod, and as this fishery develops, other trawlers will be placed in commission. The hook and line from steamers, schooners, motor and row-boats is used in the catching of halibut also, and the bulk of these fish are caught in the North Pacific up in the Gulf of Alaska—hundreds of miles from the home-ports. The long distance to and from the fishing grounds and the increasing scarcity of the fish put halibut into the luxury class in spite of the modern and economical methods which are employed.

Salmon are caught in gill-nets and traps are set in the estuaries of British Columbia rivers. Certain varieties are caught on trolling lines in the outside channels. Mackerel are caught in shore traps and also at sea by running purse seines around the schooling fish. Some are caught by jigging with a large hook from boats who attract the fish by scattering bait on the water. Herring, in our waters, are caught in shore traps and in seines. The European method of herring fishing by drift nets off-shore is not practiced in Canada, but herring drifting will undoubtedly become one of our future industries. In the lake fisheries, gill nets set from tugs are used in the catching of whitefish, herring, trout,



Steam Trawling—Spilling the Bag.

pickerel. Stationary pound nets are also used for catching the various species of fresh-water fish. In the lakes of Alberta, Saskatchewan and Manitoba, during the winter months, whitefish, trout, pickerel, pike or jackfish, tullibees and mullets are caught through the ice by gill nets.

Swordfish are captured by harpooning from vessels specially fitted out. The fish are harpooned while basking on the surface of the sea during the summer months.

Lobsters and crabs are caught in small traps on the sea bottom. The crustaceans are inveigled into the traps by means of the bait placed therein. Albacore are caught in mackerel traps—more by accident than design. Alewives, shad, pilchards, sardines are caught in weir traps and by seines. Smelts are also netted.

**The Future of Canada's Fisheries**

Canada's fisheries are a source of potential wealth. We have, so far, only partially developed them. Some particular fisheries have been prosecuted to the limit—the lobster, salmon, halibut and shad—others, and the most prolific, have scarce been touched.

The Canada Food Board's efforts to increase the home consumption of fish in order to save beef and pork for export has opened the eyes of Canadians to the abundant fish foods of the Dominion, and the consumption has increased on an average of 100 per cent. and in some districts as high as 700 per cent. Still, this is not enough when compared with the pre-war per capita



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Delco-Light brings to the farm the final aim of years of work—electricity in an efficient, economical form. Because of its low-cost and money-saving it is within the reach of every progressive farmer. It puts the farm on an equal basis with the city. It gives you city efficiency right on your own farm. Every farm should have a Delco-Light plant.

Delco-Light saves work—increases production—makes farm life happier.

So simple a child can operate it.  
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Economical because it runs on coal oil (kerosene). Gives you ample power and light. Developed and backed by world-famed engineers.

Completely illustrated literature will be sent free by your nearest distributor. Read the complete story of Delco-Light. See in pictures what it is and what it does.

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# DELCO-LIGHT

The complete electric light and power plant for farms and country homes.





## Only Merit Counted

When the Imperial Oil Co. chose **EMPIRE WALL BOARD** to finish the interior of thirty houses for their staff at Regina—of which the above are a group—they had in mind the comfort and safety of their employees, as well as their own investment. "EMPIRE" filled all their requirements.

## In What Way Is It Different?

### Instead of These Disadvantages

A fire-trap created with inflammable, ordinary pulp and paper boards that do not protect from fire or retard noises.

A cold building in winter and an unbearably hot one in summer.

A harbor for vermin, germs, rodents.

A cheap-looking wall that warps and buckles.

A board that is recommended alike for the interior of cow-stables and drawing-rooms.

The difference is in the advantages to the purchaser. The cost of Empire Wall Board is no greater than inferior boards of many deficiencies.

### You Have These Advantages

A fire-proof and sound-proof wall built largely of Gypsum (Plaster of Paris), rigidly compressed between two layers of tough chip board.

A building that can be kept at an even temperature by ordinary means. Empire Wall Board is a perfect insulator of heat and cold.

A thoroughly sanitary wall that is positively rat, vermin and germ-proof.

A smooth, firm surface that cannot warp, crack, buckle, or get out of shape.

A high-class, well-finished, quality wall board that is sound, solid and lasting; that can be finished in harmony with the most attractive decorative schemes.

Sold almost everywhere. If your lumber, building material dealer or hardware merchant does not handle Empire Wall Board, write us, and we will either tell you where you can buy it or ship you direct.

**Manitoba Gypsum Company Ltd.**  
WINNIPEG MANITOBA

## Desirable Stock Farm For Sale



View of Dwelling House and Barns (to right) at Kilallan Stock Farm, Ohaton, Alta.

convenient station half-mile distant, and is 60 miles from Edmonton, the capital of the province of Alberta. Town, Stores and School at Ohaton, two to three miles; and larger educational centre of Camrose 14 miles distant. Farm consists of 960 acres, in one block, good level land; 500 acres under cultivation, balance pastures, well fenced with 10 miles of fencing, 6½ being heavy woven wire and well sheltered and watered. Soil black loam with clay subsoil. Buildings: Frame house, 8 rooms, pantry, bath-room, etc., hot and cold water and hot air furnace. Long distance telephone. Barn-horse stable, 72x68, holding 31 head of horses, 7 loose boxes, loft, harness-room, feed-room, water tank, engine-room, modern granary with elevator, etc. Cow stable 40x36

Phone 2409 Camrose

Owing to business reasons demanding my attention in Scotland, I have decided to offer for sale, by private treaty, the well-known

### Kilallan Stock Farm

operated for the past ten years as a pure-bred Clydesdale breeding establishment.

This farm is situated in the great mixed farming belt of Central Alberta, close to the main line of the C.P.R., with fitted with stanchions, 4 loose boxes, store room, etc., also implement shed, blacksmith shop, hen house, calf house, pump house, 6 granaries and two-roomed bunk house for men. Two wells with windmills, and 4 large tanks, 3 in pastures, 1 in barn. This farm is eminently suited for the breeding and raising of pure-bred livestock. It is close to the best market centres of Western Canada, has the best of shipping facilities, and is considered a most desirable proposition for any one wishing to go in for high-class stock-raising. The present Clydesdale stud, also machinery and implements can be taken over, if so desired by purchaser, at mutual valuation. For full particulars and attractive terms apply to

**NORMAN A. WEIR, OHATON, ALBERTA.**

consumption of Great Britain and other European nations. At least one pound of fish per person weekly should be consumed in Canada to bring the home market into a healthy condition.

Canadians have got into a rut in their fish eating. Halibut, salmon and whitefish have been extensively patronized. Twenty other varieties, cheap in price, plentiful and every bit as palatable, have been practically neglected. Pacific flatfish, Pacific cods, herring, oolachons, pilchards—all sea fish in abundant supply and prepared in fresh, frozen, salted, smoked and canned states, should be consumed more in the Western provinces. The product of native waters—whitefish, trout, pickerel, jackfish, tullibee, etc., could be consumed in larger quantity. Farmer's clubs and communities, in the winter months, might very well order either Pacific or lake fish by the case and use throughout the winter. The saving over meats in cost, and of meats for patriotic purposes, will amply repay the purchasers.

Atlantic fish of various kinds can readily be procured throughout Manitoba. Sea fish from both oceans should be used more freely. The ocean supplies are unlimited. That of the lakes is limited and requires conservation to prevent depletion.

Transportation facilities have been greatly augmented to take care of the inland distribution of fish. Express refrigerator cars run on most trains coming from the Coast, and fish, nowadays, are landed at the retail stores in prime condition. The more general use of frozen fish—sea and lake varieties—is strongly advocated. Fish which are frozen immediately on coming out of the water, and kept frozen until ready for consumption is really better than fish which has been kept fresh by means of ice. In the freezing process, all bacteriological decay is suspended, and if thawed out in cold water, frozen fish will be found every bit as nice as fish freshly caught. In our country of enormous distances, the frozen fish is the most practical method of distribution and prevents waste through deterioration in transit.

### Value of Fish As a Food

Protein—that constituent in foods which serves to build up the human body—is greater in fish than in meats. In fish we have 18.77 of protein; fresh beef, 18.69; veal, mutton and pork, 18.32. Beef is not superior to fish as far as sustenance and health-giving qualities are concerned in spite of popular fallacies to the contrary. The hardiest races of the world are not necessarily meat eaters. The Scandinavians, Northern Scotch, Japanese and Chinese are great fish eaters and for stamina and general strength of body these races are unexcelled.

To conclude—this article is merely a general outline of our fishing industry and resources and is intended to give an idea of its present condition and future possibilities. It is the duty of every Canadian to become acquainted with our heritages and to do all in their power to encourage and develop them. By the co-operation and public spirit of the people, colonies become nations.



# The Deeper Life

Article II.—Thoughts About the Church  
By Rev. S. G. Bland, D.D.

**T**HERE is another idea which the Church stands for. It is manifestation or embodiment.

The Church is the continued incarnation of the Lord Jesus Christ. As He was the incarnation of

God, the word in which the unspoken thought of God uttered itself to men, as He was all of God that could be embodied in mortal flesh, manifested to men, so now unseen though present, He reveals himself in the Church, which is His body. The Church is the body of Christ, His hands, His feet, His face, His heart. How shall men know Christ except through His church? We can know no man except through his body. His deeds, his words, his looks all belong to his body. Are all of them impossible except through his body? A bodiless man is only a ghost, or not even a ghost. Ghosts, if there be such things, must needs take some kind of a body or else they can not be known to men.

A well-known English minister who had been working at the front for some time, recently reported that 70 per cent. of the men whom he conversed with who were not connected with the Church, gave as their reason, the inconsistencies of church members. Probably it is much the same with us in Canada. Sometimes good people when they meet this objection try to turn it by telling the critic not to look at the Church but to look at Christ. I question if such an answer avails much. I question, indeed, if we have the right to make it. The Church exists to be looked at. If the Church is the body of Christ we cannot expect men to seek Christ anywhere else or to judge Christ except as they see Him in His church. Christ is dependent on His church as the soul of a man is dependent on his body. The thought men will have of Christianity is the thought they have of the professedly Christian people they have known.

It is pathetic to see earnest gospel preaching in a church, some of whose officials and prominent members are distrusted or rightly disliked. The preaching is so sincere, so well-meant, so energetic and so futile. It is like an engine running at full speed but disconnected with the machinery. The preacher has spoken earnestly, tenderly, persuasively, and one of the officers who receives the offering turns the heart, it may be, of one hearer at least, to stone.

So it always has been, so it always will be. Where there is no church the people may be influenced by the preaching alone. Where there is a church they will not. In the old days when revivals were more common than they have seemed to be of late years, I have often heard it said by men who were regarded as eminently successful in conducting revival services, that a preacher alone might produce a great religious awakening where there was no church, but never where there was a dead church.

I fancy if we knew the complete religious history of any Christian man or woman we should find, with very few exceptions, that what brought them to Christ was never the mere words of Christ or their own reflections, but the influence of some good man or woman.

To be really successful a preacher must always be able to say, if you don't believe me look at my people. If you don't think Christianity is practicable look at that business man, that farmer, that lawyer, that banker. That is what people always do, in any case, whether the preacher so invite them or not. His preaching stands or falls with the reputation of his congregation, especially the business and political reputation of his leading men.



Dr. BLAND.

It is a tremendous thought. Christ can do little till He has a church, and when He has a church He can do little or nothing through that church. In joining a church a man is going to help the Lord Jesus, or most assuredly to hinder Him.

Yet if he stays out when he knows he ought to go in, he is going still to hinder. It is impossible to evade responsibility. Life is responsibility.

"Come and hear our preacher," people will say when they believe they have a preacher worth hearing in their church, but they will not get anybody very far unless it can also be said, though they would probably be too modest to say it, "Come and look at that preacher's church as well."

The Church—every least, humblest, tiniest, most insignificant little company that calls itself a church of Christ—the body of Christ! The warning in it is terrific, but the inspiration is glorious. The glory of everyday Christian living—the kindness, the helpfulness, the courtesy, the graciousness, the cheerfulness, the courage of plain people who may not preach much but do most persuasively and powerfully show the spirit of Christ.

When Lyman Beecher was exercising a ministry in Boston, that was renowned through the land, some one asked him the secret of his success. "Oh," he said, "I preach on Sunday, but my faithful 500 members practice all through the week."

Some years ago the ice took very suddenly one night between the city of Kingston, in Ontario and Wolfe Island, and a number of Wolfe Islanders who had crossed over to the city the day before on the ferry found themselves unable to get back to their homes. They gathered disconsolately on the wharf and discussed the possibility of getting home on the ice. There was prolonged discussion about the strength of the ice. "Oh," one would say, "it would bear a team." But no one started. Presently there came down an old islander who had crossed and recrossed on the ice for 30 years. He strode out on the ice, struck it a few smart blows with a stout staff he carried and struck for home. In five minutes 30 men were following him.

It is not the preachers who do it all.

Nevertheless, the Church has a peculiarly close relationship to the other rural institutions, and, in fact, to all the movements of rural life. The Church has not adequately appreciated this fact, which has its origin in a characteristic feature of country life, namely, that all its interests are very intimately bound together. The work of the farm and of the household, the life of the family, the amusements of the neighborhood, the interests of all in school, grange and Church, are closely intertwined.—K. L. Butterfield.

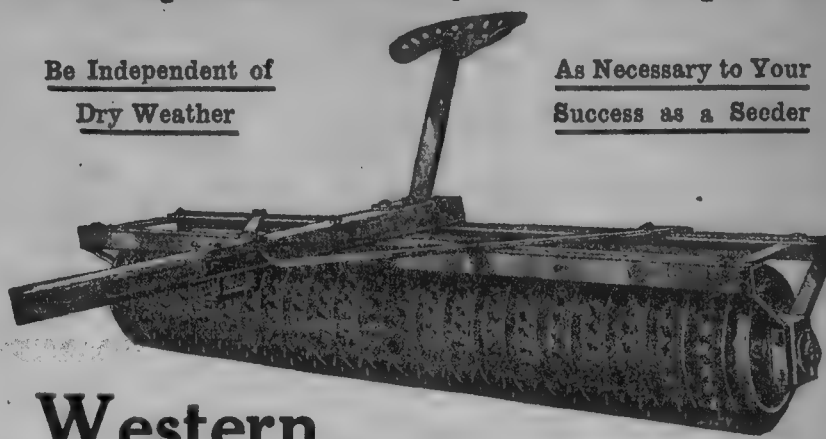
You are called, as ministers of Jesus Christ, to be the effective instruments of the Divine purpose in the shaping of that highest of all visible expressions, a society of free men acting together in the spirit of intelligent goodwill. If you strive to make your own adequate contribution to the realization of that great ideal, you will find it a task which will steadily tax all your powers to the utmost. It will demand the entire consecration of those abilities which have been trained for a noble service, and will throw you back unceasingly upon the aid and guidance of Him whose vast design it is to make this redeemed humanity His dwelling-place, and to shape that rightly-ordered life of men into a holy city, where He shall reign for ever and ever.—Chas. R. Brown.

**TEXT:**  
"Now ye are the body of Christ and members in particular."—1 Cor. xii. 27.

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# The Countrywoman

## Helping the Foreign Born

**A**T the recent convention of the Women's Section of the Saskatchewan Grain Growers' Association, Dr. J. T. M. Anderson, of the Department of Education, threw out many valuable and practical hints for Canadianizing the foreign born. Among them he said that he was recommending to women's organizations the work of adopting a school in a foreign section of the province. This has been taken up in a couple of places in Saskatchewan, and we believe in Manitoba also. The whole idea is to bring to the teacher of such a district the assurance that behind her and helping her in her self-sacrificing work is an organization of women. The organization, besides being of moral assistance to the teacher, is in a position to supply to the school many things that the department and the school board cannot. A sewing machine, for the practical teaching of dressmaking, is something which is necessary, and which is out of the question as a part of ordinary equipment. Clubs have demonstrated during the war that the cost of a sewing machine is, after all, a very small sum for a club to raise. This is only one thing. Dr. Anderson mentioned hot lunch equipment, first aid, books, papers, and various other supplies. A correspondence between the club and the children in the school was another suggestion.

There is no use thinking that Canadianization can take place in any other than the personal way. This seems a very practical way of extending a real influence to the foreign school, and one that is within the reach of every club.

## Open Seats to Women

The Ontario legislature is to bring in legislation at the present session to open its seats to women. Last summer, Premier Hearst said that when women wanted to sit in the legislature that privilege would be open to them. It is expected that, with the opening of legislative seats to women, that legislation will also be introduced giving women the right to hold municipal office on the same terms as men.

Newspaper reports of the Ontario legislature also forecast legislation along the lines of mother's allowances, the taking over of the dispensing of liquor in the province, and the extension of the time fixed for taking a vote of the people upon the continuance of the existing temperance legislation.

## Alberta's New Health Bill

An Alberta daily paper carries the following news story, which is of special interest:—

"The health department of the province will have the power to fix the amount of fees that medical practitioners shall charge in connection with communicable, contagious or infectious diseases, if the bill, of which Hon. A. G. MacKay, minister of health, gave notice in the legislature yesterday, is adopted by that body.

"It is contained in the bill to amend the Public Health Act. A number of additional diseases, such as anthrax, tuberculosis, and several others, in addition to those marked by the present law, and named infectious and contagious.

"There is another important change in the act. It gives the provincial board of health power to pass regula-

tions dealing with employment, maintenance, duties and engagement of one or more public nurses in any health district, as and when required by the board.

"There are numerous clauses in the bill dealing with sanitation, and the powers and rights of the provincial board to order certain things to be done, and several lesser amendments amplifying and making clear the powers of the provincial board and of local boards.

"In addition to the powers the provincial board now has, in case of an epidemic, to order local boards to do certain things, and if the local boards fail, to step in and do these things, and charge the same up to the municipality. The bill asks that the provincial board be given the power to act directly if circumstances demand it.

"The bill also provides that members of local boards of health shall be subject to penalties if they do not perform their duties as well as those who allow their premises to get into an unsanitary con-

establishment of training schools for children who could not make a certain standard in the mental test.

"We urged the government also to study the problem of immigration in the West. Our survey showed that over 50 per cent. of the feeble-minded and criminal class were people born in counties outside of Canada.

"We especially recommended that the problem of immigration be carefully looked into, both because of the foregoing figures and because a case of insanity is much easier to spot at the time of landing than later on. We pointed out that it is much better for a country to have many insane among its population than feeble-minded, because there is a chance for cure of insanity, but never of feeble-mindedness. Brain cells which are lacking cannot be supplied.

"Eighty per cent. of the unmarried mothers in the Winnipeg hospitals were mentally deficient, and 60 per cent. of these were obvious cases. Of

indecent housing conditions. This, she said, was particularly true of foreign districts. It is an astounding statement, and one that bears further investigation. In explanation she said that many farm houses are only of two or three rooms, and that perforce the entire family must occupy a common sleeping room. Where the general morale of the family is lax there is little effort to cherish privacy, and the result is a breaking down of what moral stamina remains.

The Dominion government is distributing to the provinces a loan of \$25,000,000, to be used in better housing schemes. On first thought this would appear to be an urban problem. Statements such as Mrs. Murphy makes, however, would have one's attention diverted to the question from a rural standpoint as well. Cannot some of this \$25,000,000 be used in bettering the housing conditions in the rural parts of the west?

## Parties and Candidates

In the February issue of *The Civilian*, is an article entitled *Party Government*, by Albert Horton, editor debates, the senate. In it is this paragraph: "Along with the function of formulating the political issues, the political parties bring out the candidates. Despite the common disparagement of party politicians, it is more than probable that if the nomination of parliamentary candidates were left to individual initiative, there would be a distinct deterioration in the quality of

our public men. There would be more opportunity for eccentrics to thrust themselves on the electorate, while the men of real ability who are sought by, rather than seek the office, would be deterred from the unseemly scramble.

It (the party machine) naturally seeks out a man of wide influence in his district, the one likely to win the largest number of votes, and therefore to be most truly representative of his constituents, and a close observation of our public men for a number of years will convince any unprejudiced mind that the men so chosen are—not always by any means, but as a rule—in character and ability above the average of their fellow-citizens, and worthy of the responsibilities entrusted to them."

In the first it is a remarkable incident that a man who edits the debates of the senate should have spirit enough left to make such a statement. In the second place, we beg to differ with the statement. How can we have responsible and representative government if, instead of the electors choosing who shall represent them, we have a party machine performing that function? The practice of letting party machines choose parliamentary candidates is a caricature and sinecure of representative government. We have the candidates chosen representatives of a party, not of the electors; and we have them responsible to the party, not to the electors. The system does not minimize seeking after office, but accentuates and develops it. We have the choice of the machine resting on the most biased party man, and the one most likely to do the will of the party. In fact, so keen is the machine to have a pliable party devotee, that it often seeks outside the constituency for such. The writer quoted speaks of "deterioration." We ask in all sincerity, "Is such a thing possible?"



Federation of Women's Institutes.

Upper row, from left to right: Miss Helen McCain, New Brunswick; Mrs. J. M. Watt, Manitoba; Miss Mary MacIsaac, Alberta; Mr. G. A. Putham, Ontario; Miss Isabel Noble, Alberta; Miss Helen MacDougald, Manitoba; Miss A. Hill, Quebec; Mrs. T. Patterson, Ontario. Seated, from left to right: Mrs. W. B. Cameron, Saskatchewan; Mrs. H. W. Dayton, Manitoba; Mrs. Todd, Ontario; Mrs. Arthur Murphy, president, Alberta; Mrs. Blackwood-Wileman, British Columbia; Miss A. De Lury, Saskatchewan.

dition, and there is also provision whereby the corporation itself, if it does not appoint a local board to do this duty, is liable to be penalized in the sum of \$500.

"Another bill introduced by Mr. MacKay amends the Registered Nurses Act. The main change in this is that it provides for reciprocity of registered nurses between Alberta and other provinces of Canada, and states of the United States. Also, where the reciprocity does not apply when a nurse comes in from outside, the question of examinations will be dealt with by the senate of the university, the same as examinations are with reference to all other professions.

"There are a number of amendments to this act, making some important changes in the venereal diseases prevention. The most radical, perhaps, is a clause which provides that any person known to be suffering with the disease may be arrested, detained and held for treatment.

"There are several other amendments, making more full and complete working out of the same, and evidently from the act the intention of the department is to proceed at once with clinics and tests from different centres."

## Mental Hygiene

Dr. C. M. Hincks, secretary of the Canadian Association for Mental Hygiene, Ottawa, is touring the country, and has delivered addresses at many points. Speaking at Saskatoon recently, he said:—

"We gathered statistics from cases taken from the Manitoba jails, hospitals for the insane, various detention places, and corrective institutions. Our report, when completed, comprised some 150 closely typewritten pages, of which 20 pages were our recommendations to the Manitoba government.

"The association recommended the

all these cases, 44.23 per cent. were British-born women, who had been sent from the very scum of the east end of London by an organization which labored under the delusion that our broad western prairies would cure feeble-mindedness. These mental defectives should be turned back at the port of entry. It is an injustice to Canada to allow them to be sent here.

"The laws with regard to this matter are good enough, but there is no adequate machinery for their enforcement. An immigrant, and all his dependants who are contemplating following him, should be given a thorough mental examination before he is allowed to sail.

"The problem of the returned soldier who is suffering from shell shock or other nervous disability, is serious just now, but the association is trying hard to enforce a system whereby these unfortunates may be nursed back to a normal mental condition. The majority of hospitals for the insane are merely glorified boarding-houses.

"It is not the fault of the doctors in charge, who have been forced to pay more attention to the Holstein cows than to the patients, but it is the fault of the governments and of society as a whole. We have been living in a fool's paradise concerning this matter, and have not considered it in the proper economic sense.

"The results of our survey in Manitoba proved to us that the feeble-minded are not only a menace to the community, but an expense to the government."

## Housing Rural Peoples

Judge Emily Murphy, during the recent convention of the Federation of Women's Institutes, made the statement that much of the immorality one finds in rural districts is the result of

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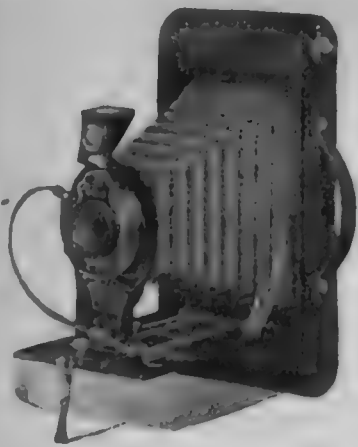


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# Farm Women's Clubs

### A Personal Word

**T**O the members of the U.F.W.A.: While I am not a stranger to your organization, having been connected with an U.F.W. local for the past year, and feeling for some time the force of this movement, which has wonderful possibilities—realities we believe they will be in the near future, I am, however, a stranger to the members of the organization at large, and, as such, I wish to make your acquaintance. I trust that, in the capacity of your secretary, I shall achieve a close contact with each local, and serve the interests of our organization to the best of my ability.

While teaching in a rural school I realized the value of the U.F.W.A. in aiding and enlarging my work. We worked together in many matters pertaining to the school and community, and with marked success; in fact, I could not begin to estimate the value of the U.F.W. local, both in school work and the improvement in the social life of the community.

I count it an honor and a great pleasure to serve you now in the Central office, and I ask your heartiest co-operation with me in furthering the aims of our association.—Yours in sincerity, Anna M. Archibald, acting provincial secretary.

### Sterling After Members

Sterling U.F.W.A. has not been holding regular meetings because of the influenza epidemic. Only one meeting was held in three months, the latter part of 1918. That was held for the purpose of electing a delegate to the convention, and the officers for 1919. Mrs. Blanche Scheelar attended the convention as a delegate, and brought back a most interesting report. The officers for 1919 are as follows: President, Mrs. Blanche Scheelar; vice-president, Mrs. Ida Chisoon; secretary-treasurer, Mrs. Emma Freaderick; directors, Mrs. C. H. Fromm, Mrs. R. D. Allen and Mrs. P. S. Scheelar.

Our union hasn't a very big report for 1918, because several of our members have been transferred to a new union, where it was more convenient for them to attend. Many of our other members have little children to take up a great part of their time. However, we finished two parcels of Red Cross work, raised for the Red Cross fund,

\$65, for the Y.M.C.A. hut \$15. This money is the proceeds of a farewell dance, given in honor of boys going to the front from this neighborhood, and an entertainment and mask social and debate. We are arranging for some social features for 1919, the first to be a progressive card party, at the home of the secretary, for the grown-ups, and a fishing pond for the kiddies. We hope to have a better report for 1919, as now that the war is over we can turn our thoughts toward the school, the young people, and some social features.

We hold our meetings at the homes of the members, each having her turn alphabetically, so we all know just what month we are to entertain the club. We serve light lunch after the business of the meeting, and thereby have a chat with friends and neighbors, which, only for the meetings, we would not have the pleasure of enjoying very often. During 1918 we had ten active members, and so far in 1919 we have only seven, but hope to get more members, as there are quite a few near us where there is no union.—Mrs. R. D. Allen, Sterling U.F.W.A., Strome, Alta.

### Westlock Local Alive

Westlock local organized on January 9, 1918, with eight members. On February 19, 1919, the membership numbered 34. During this time we had 11 regular meetings and three special meetings.

We planned to take up the following subjects: Food conservation, labor-saving devices, home economics, chickens, home canning, egg circle, poultry shipping, winter amusements for the young people, and several other subjects, but influenza prevented our program being carried out, and the two last-named subjects were not discussed. We also had an address on consolidated schools, by Mr. Barron, of the Department of Education. Our members already belonged to the local Red Cross auxiliaries before the U.F.W.A. was started, and our Red Cross work was all done through those channels. We organized a picnic for the membership drive meeting in June, at which Miss Spiller, the provincial secretary spoke on U.F.W.A. work, and won many friends. From the profits of this picnic, we contributed \$20 to the Y.M.C.A. hut fund.

At the Westlock agricultural fair,

we had a rest tent, 18 by 22, with five-foot walls, with wash room, toilet, towels, etc. The main part of the tent was furnished with table, seats and cushions. The floor was covered with robes and rugs, so that the children could sit or lie down as they saw fit. We were proud of our rest tent, but it rained steadily all fair day, and we were very disappointed that we could not use it. I feel sure it would have been a great success had the day been fine.

We experience difficulty in getting some of our members to attend regularly, but we find that, if we can get members to attend two or three consecutive meetings, we arouse their interest, and regular attendance follows. To those who have attended regular benefit has come. This is evidenced by a broader knowledge of public affairs, and particularly as they affect farm women and their homes, by mutual sympathy and understanding and the development of a real community spirit among the women of the neighborhood. Twenty-one members and three visitors attended our last meeting, held on February 19. The secretary gave a report on the convention, and the resolutions, as endorsed by the convention, were discussed. Several other subjects of interest were also discussed.

This local has adopted the four-fold standard of development, as used by the Young Peoples' Clubs, and hope to adapt it to our club program for the year. A strong committee has been appointed to look after this phase of the work. We are planning a box social and dance, to be held at Westlock, on Friday, March 14, which we expect will be a big success.—Mrs. Herbert Greenfield, sec.-treas., U.F.W.A., Westlock, Alta.

### Normanton Annual Meeting

On January 20, the annual meeting of the Normanton W.S.G.A. was held, at Normanton school house, a fair number being present. The secretary read the following report:—

"During the year the association has held one concert, sale and dance, and a picnic, followed by a sale and dance. These events resulted in the sum of \$165.74 being obtained. In addition to this, there were \$22 membership fees, and a balance brought forward from 1917 of \$23.68, making a total of \$211.42. Of this total, \$30 was donated to the Y.M.C.A., \$50 to Red Cross, and parcels sent to soldiers, \$12. There remains on hand material for working to the value of \$36.32, and a cash balance of \$7.72."

The following officers were elected for the year: President, Mrs. H. O. Stallibrass, vice-president, Mrs. Hartwell; secretary, Mrs. Dice Armstrong; corresponding secretary, Miss Kathleen Stallibrass; directors, Mrs. J. G. Brown, Mrs. R. T. Carr, Mrs. R. Langborn, Mrs. Robt. Hales, Mrs. Woodcock, and Miss F. Quinn. Mrs. Walter Smith was elected as delegate to the annual convention.

During the year, the association has secured a library, through the Saskatchewan Travelling Libraries Association, which has met with considerable support. The honorary librarian is Mrs. H. Stallibrass, and books may be obtained from her at her home, where rules for borrowers may be had. The directors are arranging a sale of work and a concert, to take place at an early date, which will be duly announced. A very hearty vote of thanks was rendered to the retiring officers, who did so much to make the year's work a success.—Kathleen Stallibrass, corresponding secretary, Normanton W.G.G.A., Sask.

### Success Has Right Spirit

Our Woman's Section is near Melville, and in arranging for a school fair we co-operate with the town. The children for miles around take their work and help to make the day a big success. Some of the members of our local are greatly interested and have taken part in judging grain and garden stuff. During the past year we have had members

## Shall We Organize a Women's Local?

By Irene Paribly



Mrs. Irene Paribly

We will suppose, now that having studied the qualities necessary for the make-up of a successful club, we have decided, some of us anyway, that we think it would be a pretty nice thing to have a Women's Section in our district. We have discovered at least five neighbors who are more or less interested in the farmers' movement. We have found one or two who have vision enough to look into the future and see the great work for rural progress and betterment which this organized force of farm men and women can bring about. These few women are eager to lend a helping hand to improve conditions local, provincial, world-wide, and in organization they see the only hope for

doing so.

How are they to set about it? In the first place they must write to the provincial secretary of the Women's Section, whose name and address in each province can always be found in The Guide pages, and ask her to forward all the material she can on organizing a Women's Section. While these few enthusiasts are waiting for the literature they each undertake to canvass every woman in a certain district assigned to them, with the object of interesting every woman and at least getting her promise to come to a preliminary meeting to discuss the question of whether or not a Woman's Section shall be formed.

They will meet with the usual discouragements we all come up against: Some women will say they have no time; others will say they do not believe in women meddling in public affairs, the good Lord did not make them for that; the men's local can do all that is necessary for the farmers' movement; and Tom, Dick or Harry have no use for these suffragette women who are always wanting to go to a meeting; some will say they will think about it, and you know that will be the end of the matter so long as they are concerned.

But, finally, there will be enough women who will promise to turn up at a certain house, on a certain day, to go through the organization literature, and decide the great question, "Shall we organize a Woman's Section?"

on the roll from eight school districts, and as far as we are able we have tried to interest them in the great necessity of improving our school and other local conditions. We have had the satisfaction of arousing their interest to some extent, and expect to see good results later on.

There is a co-operative creamery in Melville, and also a co-operative store, where we placed an egg crate, to be filled by donations of eggs, to help raise funds for overseas boxes. In the early part of spring, five families of our busiest workers moved to distant districts, and each family was presented with a half-dozen silver teaspoons as a parting gift from the Success W.G.G.A. In spite of the fact that we lost so many workers, and that we do our own work, we have accomplished more this year than ever before.

The Woman's Section has taken in and paid out \$850, and this does not include cake that was sent in overseas boxes. The ladies donated cakes for that purpose to the value of \$300, which brings the total up to \$1,150. About 160 boxes were packed, and each contained a pair of good woolen socks, cake, gum, candy, candles, towel, soap, cigarettes, etc. The boxes were valued at \$4.00 a-piece, and were sent to boys who have gone from our district, and who, we feel sure, will become grain growers as soon as they get back, and thus help to strengthen the friendship of the soldiers and farmers.

All of the young people over 16 belong to the local, and take an active part in the meetings. They know what the grain growers stand for and what their aims are, thereby fitting themselves to become better farmers. The women and girls of this district have done their bit by helping with harvest and threshing. Because of the influenza, we have not had any concerts, but the local holds regular meetings and we attend them. So far it has not been possible to hold an annual meeting. We are sending a delegate to the convention and hope to find fresh encouragement for the next year's work.—Mrs. P. Wotherspoon, sec.-treas., Success W.G.G.A.

#### Buys Victory Bonds

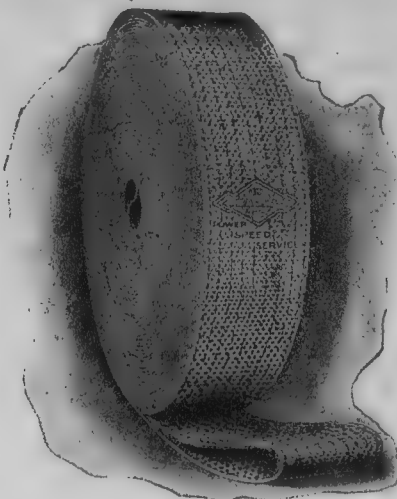
It is with great pleasure and satisfaction that I present the third annual report of our society. It is the first one in its history that we have not been in the midst and turmoil of war. Surely it is ours to rejoice, not only in the end of the war, but in victory. The enemy has been frustrated in his designs, and we should be able to carry on with lighter hearts than we have known for many a day. Owing to the "flu" epidemic in our district, we were unable to hold several of our monthly meetings. Seven meetings were held during the war, with a good attendance of members and 15 visitors. Demonstrators were present at two of our meetings.

The receipts for the year were \$90.10, \$73.50 of which were donated to the Red Cross and soldiers' comforts. Besides the above, 100 pairs of socks were knitted by our members; also sewing done for the Red Cross. There have been 54 boxes sent overseas, valued at \$3.00 each, making a total of \$162. In December of 1917, money was collected through this organization to buy a Victory Bond to help the Y.M.C.A. Hut for Portage la Prairie. There was also \$87 donated to the Children's Aid Society, Winnipeg.—Gertrude E. Patterson, secretary, Edwin H.E.S., Man.

#### Forrest Starts New Work

On Thursday, February 6, the Forrest Women's Section met for its monthly meeting at the home of Mrs. White, with a good attendance. The meeting was one given to the discussion of reconstruction. As there is now no further need of packing boxes for the soldiers overseas, new fields of activities were discussed. A contribution was made to the wedding gift for the Princess Patricia of Connaught. A donation from the municipal funds on hand will be given to the Brandon general hospital. Arrangements are being made to have a demonstrator in dressmaking hold classes in Forrest in the course of a few weeks.—Mrs. A. McCallum, press reporter, Forrest, Man.

## Dunlop "Gibraltar Red Special" Frictioned-Surface Thresher Belt



This belt was introduced to Thresher owners a little over a year ago. By its steady, consistent service and ability to withstand severe conditions of heat and cold, to which a thresher belt is subjected, it has proven its right to be called "The Belt De Luxe" for Thresher or Agricultural use.

"Gibraltar Red Special" is a belt that will give superior service and satisfaction to you at all times. This year, as an added feature, we are stitching it at no extra cost to you.

### "Reliance" Rubber-covered Belt

"Reliance" is still the choice of those who insist on getting the best in the rubber-covered type.

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Over There—  
Over Here

STAG Chewing Tobacco is appreciated by both of Canada's war units—those who fought in Flanders and those who served at home.

It is also enjoyed by civilians of all classes throughout Canada and is recognized as being



"Ever-lastingly Good"



# Young Canada Club

By Dixie  
Patton

## My Funniest Experience

I AM a little rubber doll. My name is Peppina. I used to be very discontented with my lot, but am now the happiest little doll in the world.

One day my mistress, whose name is Idene Louis, went out rowing with her mother, father and little brother. Othel, my mistress, took me with her, while her brother took his small tin rifle. This was the first time I had ever been in a row-boat, and I thought I was at last going to see life.

Othel had great fun shooting at the water-lilies we passed. Idene, who was watching the shooting, failed to pay much attention to me, and at a very critical moment I plunged headlong into the water. But I did not drown. Oh, no! Being made of rubber, I was quite water-proof. How nice the cool water felt to my back! I gazed up at the sky and congratulated myself upon my escape from grubby little hands. I passed a little fish who gave me a spiteful shove with his tail.

After a while a gentle breeze sprang up, rocking me softly to and fro among the waves. This was much nicer than being scrubbed in a tiny doll's bathtub. At last the sun sank in the West and the bright stars came out to shine in the heavens. It was very chilly, and although I did not like to admit it, I almost longed for my cozy little bed in Idene's nursery. But I closed my eyes and the soft movement of the waves lulled me to sleep.

I woke up at sunrise the next morning and felt greatly refreshed by my night's sleep on the water. I had not gone far since sunrise when I bumped into a twig which was floating in the water. Now, a twig may seem a very small thing to you, but to me it is very large, and it hurt, too. A water-bug was sitting on a weed near-by, laughing at me. His insolence made me very cross. And giving the twig a shove (which I did with great difficulty) I landed it against the weed the bug was sitting on, and knocked him off his

perch. "Serves you right," I said, and floated on.

Two people in a row-boat spied me as I went floating by, and rowed towards me. "Why it's a rubber doll!" exclaimed the girl (for one of the occupants of the boat was a girl), and reaching forward she lifted me out of the water. "H'm, wonder where it came from," observed the other without interest. I soon found myself in the bottom of the boat.

Evidently the people in the boat weren't very fond of little rubber dolls. How I wished I was out among the waves! And I got my wish, too, for a few moments later the girl who was leaning forward picking a water-lily, lost her balance, and as the man (for the other person was a man) was rescuing her, his foot kicked against me and I pitched out into the water. Dear! how nice the water was! On and on I floated. But it seemed as though this day was suited for accidents. I had not gone far when I floated right through a group of small fishes who were playing tag, and I quite spoilt their game. This made them very angry and before I made my escape I had received numerous slaps and pushes. My blood had scarcely cooled down from these insults when I got tangled up in

some grass and reeds that were growing not far from the shore. I tried vainly to get loose, but the grass only seemed to cling the closer.

At last a friendly old frog happened to come by, and with his assistance I was at last released. After thanking him with a very grateful heart I floated on. But as fate willed it, I soon came in contact with a group of polywogs and young frogs. And at my appearance the latter set up such a croaking and shrill chirping that I was afraid I would lose my sense of hearing.

I was certainly very glad when I got out of the frog settlement for my ears were still ringing. "If anything else happens," I said to myself, "I believe I shall just die." For I was on the verge of tears as it was. But something else did happen, and I didn't die. Oh, no! I floated against a pebble on the shore. This hurt a little and I lay down upon the sand and had a cry. "Oh, how I wish I was back in my little bed in Idene's nursery! Oh! how I wish I hadn't run away! I hate the waves! I hate them! I hate them! Boo-hoo-hoo!"

A little boy and girl were playing on the shore of the lake, and they saw me as I lay on the sand. The children were Idene and Othel. Idene caught

me up in her arms. How glad she was to see me again! I was quite as glad to see Idene.

"See!" exclaimed Idene, "it is my little rubber dolly. I'm so glad to see you! I cried nearly all night when I saw that you were gone. I thought the fishes would eat you. I had forgotten that you were rubber and would float in water. Dear little Peppina!" And Idene went running home to show me to her mother. I am a good little doll now, and never think of running away from home. I have had many experiences while living with the Louis', but I believe this is my funniest one. —Ovava Alice Ruth Dutch, age 18, Denzil, Sask.

## An Interesting Trip

I would like to become a member of the Young Canada Club. I read the stories and letters in it. I came to this province with my parents in May, 1910, and have lived on a farm ever since. We travelled over 200 miles in a wagon and saw lots of Indians and antelopes and coyotes on our way. I was only three years old at the time. I am now 11 years old. I help my father with farm work. I drove four horses in a harrow and I harrowed 300 acres of land last summer. Wishing the Young Canada Club success. —Delmas J. Burkholder, Excel, Alta.

## A Funny Colt

This is my first letter to your interesting club. I read the letters almost every week and think they are very interesting.

I am going to tell you of a colt we have; his name is Baron Crawford. He likes to be petted very much, but when you are petting him he will nip you. This morning my little brother was petting him when the colt gave him a nip. My brother slapped him then Baron turned around and kicked at him but missed, then he ran away to his mother. I have two horses a saddle and a pig. —Harry Morrow, age 12 years, Seal, Alta.

## THE DOO DADS INDULGE IN SNOWBALLING

THIS week we see the Doo Dads having a high-old-time at playing snowball. The snow must be a great deal deeper in their country this year than it is in our country. They have built a fort and are ready for action. The opposing side are trying to take the fort from them. They sprung a great surprise on the fellows in the fort when they invented slings for throwing the balls. They are a fine arrangement as the stem is made of bamboo and if you pull them back good and far and then let go "quick" the snowball will smash the fort all right. The poor old Cop is afraid of his life that some one is going to get hurt. He never saw anything just like those slings before. Percy Haw Haw, is the captain of the fort, and he is trying to rally his men because it looks as if the other side were going to take it. He may get his eye-glass broken in the fray. That is a clever little fellow who is pushing over the ladder. He believes that one push is better than a half-a-dozen snowballs. Some of the Doo Dads are going to get snowed-under when those big balls come rolling down that slide.

Doe Sawbones knows the courage of the Doo Dads tribe and he realizes that before that fort is taken he is going to be needed. He has his little hut right on the spot. If the Doo Dads could see him sharpening his saw they would shiver with something else beside the cold. Sleepy Sam isn't bothered by the cold, but he will wake up pretty quickly when that snowball hits him.



## LADY GRENVILLE DRESS



### A Typical Example of "EATON Made" Value

**Silk-Finished Poplin Dress—17-D270.**—The material used in this smart Lady Grenville Frook is a fine-grade Silk-finished Poplin, of splendid appearance, and wears especially well. The bodice of long-waisted appearance, is very graceful and is prettily adorned with Silk-cord Braiding. The Skirt falls shortly from a yoke effect about the hips, and the broad belt, defining the normal waistline, is trimmed to match the bodice: a row of two-tone buttons appears down centre front, matching those used on the sleeves, which is further trimmed with a double row of embroidery braiding. A pretty collar of Paillette Silk adds a desirable touch to a garment which is a value of special merit. Skirt has a three-inch basted hem. Colors: Black, Navy, Sand, Pearl Grey, or Brown. Bust sizes: 34, 36, 38, 40, 42, 44, and 46 inches; Skirt lengths: 35, 36, 37, 38, and 39 inches.

PRICE  
Prepaid 13.75

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### EUROPE Wants Holsteins

Little Belgium alone requires 20,000 pure-bred and 100,000 grade Holsteins. Other European countries are in a similar condition.

**BREED WHAT THE WORLD WANTS  
IF YOU CAN'T BUY A HEIFER  
BUY A HEIFER.**

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## The Universal Phonograph!

*The Brunswick*  
ALL PHONOGRAPHS IN ONE

is called Universal because it is the only phonograph designed to play all records correctly.

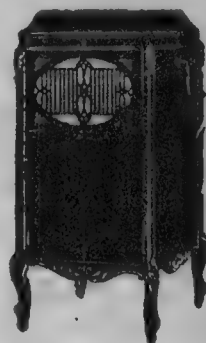
Mark you, we lay stress on the word "correctly." It is one thing to play all records, but quite another to play them all correctly—to play them exactly as they are played on the instrument for which they are designed, without the slightest risk of injury to any record.

The Brunswick is the true Universal phonograph, because:

1 The "Ultona," the only reproducer which possesses exactly the right diaphragm, which gives the exact weight, and which has the correct needle for playing each make of record.

2 The all-wood tone chamber—built like a violin, entirely from well-seasoned wood. Absolutely no metal whatever, with the consequent freedom from all metallic harshness.

And the Brunswick has every other good feature of every other phonograph, plus cabinet work of the highest quality in design and workmanship.



### Let Your Ears Be The Judge

Fill in and Mail us this Coupon

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## No Peace Terms Possible

**THE** yearly work of the gopher is intolerable. It must be War! War! until he is exterminated.

You will find no better weapon with which to fight this pest than Gophercide—which is strychnine, shorn of its bitter taste, and made eighty times more soluble than ordinary strychnine—requiring no vinegar or acids—just warm water.

## Gophercide

gets the gophers every time—and gets them quickly. Dissolve a package of Gophercide in half a gallon of warm water and in this, soak a gallon of wheat—and you have sufficient to kill about 400 gophers. Absolutely certain death—does not deteriorate with time or weather—and the gopher likes it.

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## Why Walk?

The Watson Harrow Cart has made the worst job on the farm one of the best. It does away with toil-

some plodding through loose soil and smothering dust clouds.

The seat is high enough to escape the dust, and the construction is especially designed for light weight. The swivel axle permits the cart to follow the harrow at every turn and the driver is always facing the team.

They are made in the following sizes and weights:

24 inch wheel size. Weight 75 lbs.

28 inch wheel size. Weight 85 lbs.

36 inch wheel size. Weight 95 lbs.

*John Watson Mfg. Co.*

WINNIPEG

## "You Can't Fool Folks All of the Time—"

For years we've been telling Canadian Farmers that **Kill-Em-Quick Gopher Poison** is the most effective gopher exterminator, the surest, safest and cheapest that they can buy at any price.

We've backed our statements with an iron-clad promise printed on every package to return the purchase price to anybody who buys **Kill-Em-Quick** and for any reason finds it unsatisfactory.

More than 1,000,000 packages were sold in Canada in 1918, and less than a dozen farmers asked for the return of their money.

If **Kill-Em-Quick** did not deliver the results we would have had an avalanche of demands for money back. You can't fool everybody all of the time.

If you've never tried increasing your crops by killing the gophers with **Kill-Em-Quick**, you can't know how much profit there is in it. And you'll never have that extra profit to spend or put in the bank until you do try it.



We make no new claims, none that we did not make thirteen years ago when **Kill-Em-Quick** first came out. We simply repeat over and over that it is absolutely sure to kill all of the gophers on land where **Kill-Em-Quick** is used according to our simple directions, that it is the most effective and the cheapest means of ridding land of this destructive pest.

As a good business man, which you must be to be a good farmer, you cannot afford not to investigate what **Kill-Em-Quick** will do for you.

Get **Kill-Em-Quick**. You can buy through your local association at wholesale prices. Get it at once, use it when the gophers first come out of their holes in spring, and as often as they appear on your land this summer. It will increase your crops from one to five bushels per acre—and even more.

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REGINA Dept. B. CANADA

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Our work is incomparable in finish and appearance. Have you been dreading to have your dental work done? No need of it; we have scores of satisfied patients who will tell you so.

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Double Buckle Whalebone \$10.00  
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Painless extracting of teeth. Gold Fillings. Porcelain Fillings. Silver and Alloy Fillings.

Every bit of dental work carries the Robinson stamp. When you get tired experimenting with unskilled dentists, give us a trial. Hundreds upon hundreds of testimonials from patients I have no other office in Western Canada. Do not be deceived by unscrupulous dentists who try to make you believe they have my system.

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### Facts to Consider

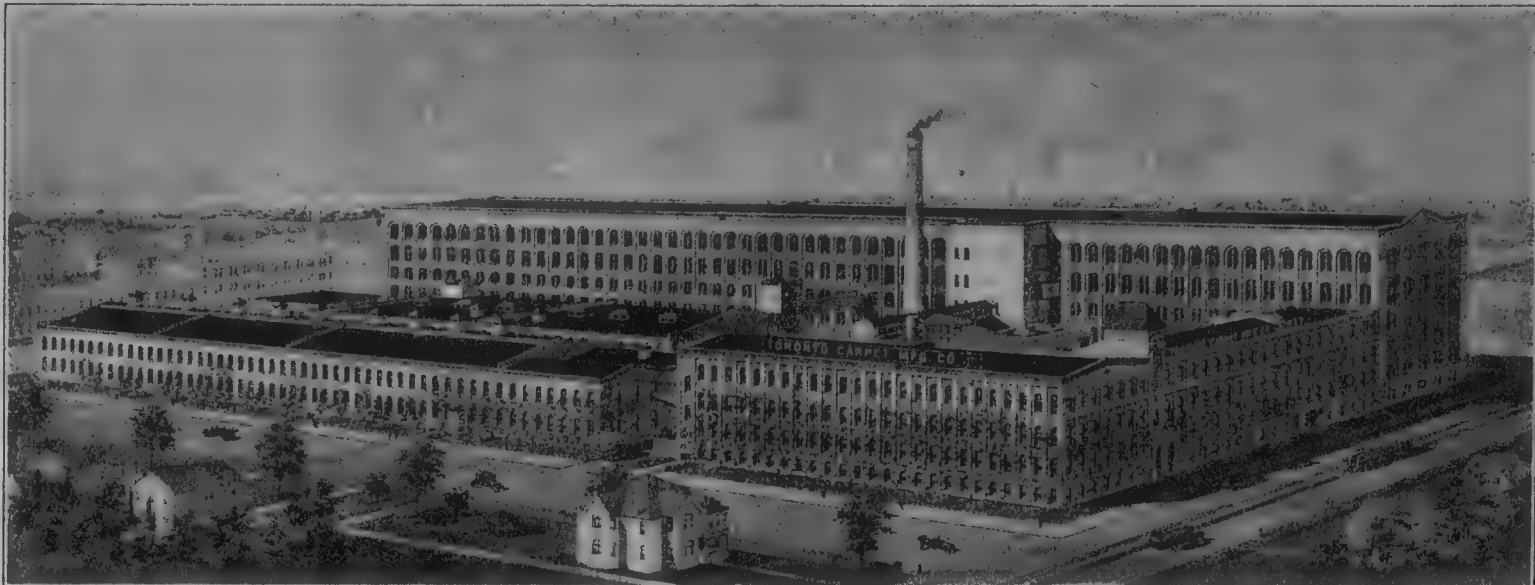
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## The Barrymore Cloth Co. Limited

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Suitings and Cloakings for Men and Women, Velours, Cassimeres, Cheviots, Spinners of Worsted Yarn

## Our Ottawa Letter

*Tariff a burning question—Sir Sam Hughes Runs Amuck—Western Members in caucus—By The Guide's Special Correspondent*

OTTAWA, March 7.—While the debate on the address still occupies the attention of parliament and is likely to continue to do so for the greater part of another week, members have really been more interested in private discussion of possible developments of the future. Coupled with a feeling that it would be a serious matter from the national standpoint to have the existing political and governmental situation disturbed, there is a certain amount of uneasiness as to the certainty of the ship of state being guided safely through the sessional seas to the safe port of prorogation away in the dim distance.

The tariff is undoubtedly the crux of the problem which faces the government and its supporters. The insistent demands from the West for a downward revision of the tariff has led the government to promise a special caucus to consider the question, and at that gathering western members will no doubt put all their cards on the table and ask the administration to show its hand. The caucus will be the most important in the history of Unionism. A western member in frankly discussing the situation today, while expressing a strong disinclination to seeing anything done to precipitate a political crisis, remarked, "If we do not succeed in making the government do something the people of the West will not send us back to Ottawa."

The tariff question is likewise a problem to the opposition. The Liberal advisory committee is in daily session, and it is understood that one of the matters under consideration is a possible amendment to the address, calling for a downward scaling of the tariff. The opposition is just as anxious as the Liberal Unionists not to precipitate a crisis as they know they could not form a government. The prospect is that if they figure out that the majority

of Liberal Unionists will stick to the government they will produce an amendment and reap whatever benefit may accrue to them from forcing the western supporters to vote against it. In other words, if the amendment is brought forth, it will be in the hope that it will be opposed and not supported by the members from the West.

During the course of the debate this week it has been noticeable that practically every speaker from Quebec province favors a policy of free agricultural implements. Ernest LaPointe, of Kamouraska, went further and declared that, as a matter of fact, the majority of the people of the East believe in the tariff viewpoint of the West and would be glad to see a downward revision of the tariff.

### Clark for Unionism

Mr. LaPointe was replying to Dr. Michael Clark, who in a characteristically eloquent speech had shown a spirit of strong adhesiveness to the Union government, while still maintaining his free trade views. There was much of praise and little of criticism in the remarks of the member for Red Deer, although he was inclined to admit that he has a lively consciousness of the blandishment of both political parties. For the present, however, he prefers to stay with Unionism, but it was quite apparent that he left more than one door open, through which he can walk, should he desire to. As a matter of fact he frankly stated that he was willing to depart from his present colleagues at any time it was in the best interests of the country that he should do so.

At this point it would be appropriate to mention that there is a strong movement within the unionist camp to make a new political party out of its different elements. Sir Thomas White is doing much to further this aim, and W. E. Middlebro, the chief government whip, is one of its most enthusiastic supporters. Subsequent to both the



THE above is the home of the Canadian Potato Machinery Co. Limited, situated at Galt, Ont., where that well-known line of O-K Canadian Potato Machines is made. This company was originally the Canadian branch of the Champion Potato Machinery Co., of Hammond, Ind. The Canadian business grew to such proportions that it was found necessary to have a factory to look after the Canadian trade. Therefore, in January, 1909, the Canadian Potato Machinery Co. Limited, was incorporated under Dominion Laws. Since that time the business has grown to such proportion that additions have been added to the original plant, so that it has reached the proportion as shown in the above view. In the

## O-K Canadian Line

there are cutters, planters, sprayers and diggers which are getting bigger and better crops for the farmers all over Canada. This is demonstrated by the fact that Canada's Potato Crop for 1918 was over 105,000,000 bushels.

There are two types of planters in the Canadian Line, No. 22 and No. 23. The No. 22, which is entirely automatic, has found most favor with the western farmer, with it one can plant from three to four acres a day. It opens the trench, drops the seed, covers it and marks for the next row, all in one operation.

Three types of sprayers appear to be filling the requirements. There is one for the largest or smallest user. The O-K Spr is a compressed air sprayer; it can be slung over the shoulder and with the two-foot lance and non-clog nozzle it can be used to spray small patches of potatoes, bushes, trees, stables, coops and cattle.

The Two-Row Sprayer is operated like a wheelbarrow, for spraying row-crops, and can be used for all kinds of stationary spraying. The Four-Row Sprayer is the machine for the large grower, it will spray an acre in twenty minutes, and is adjustable to wide and narrow rows and high and low vines. Spraying is becoming a necessity and these sprayers have been designed to meet all kinds of spraying effectively.

There are three types of diggers also; these have been developed from ten years' experience in the Canadian fields, they are so designed that there is a type to meet the requirement of most any potato field.

It will pay to write for descriptive literature.

**CANADIAN POTATO MACHINERY CO. LTD.**  
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# SARNIA FENCE

*Highest Quality*  
*Lowest Price--Real Service*

*To our Friends the Grain Growers of Western Canada, We extend Greeting:*

The Sarnia Fence Company has established headquarters at Winnipeg, thus providing a nearby shipping point for all Western Canada. Our business in Winnipeg is in charge of a competent manager, with able assistants, well qualified to render a service along intelligent lines, men who know the fence business, men who have been engaged in the business for years. Every phase of our business is planned to meet the needs of the farmers. We sell direct, thus saving all profits except a small one for manufacturing and a big one for you, Mr. Farmer. In dealing direct with us, you take advantage of and save middlemen's profits in every form whatsoever.

It is to your advantage to know more about us. Write our nearest office and let us send you literature descriptive of our various styles of fencing intended to meet all needs and purposes of Canadian farmers, and we will tell you more about our plan of dealing direct with the farmers. It would pay you to interest your neighbors to group your orders and to buy in larger quantity, thus saving shipping expenses which aggregate to a considerable sum when properly handled.

The Grain Growers are well organized. We want them to get in closer touch with us for the very good reason that our plan of dealing direct harmonizes with the high purposes of their organization. If you are a member of the Grain Growers' Association, tell your Secretary to write us for Sarnia Farmers' Friend Fencing information.

The Sarnia Fence has justly earned, by the test of time, the acid test and the merit test, the name and fame of being the "best fence made in Canada." Our farmer customers write us this way. We get such letters from every quarter of the Dominion. We agree that they are right, because we know there cannot be better fence made than the Sarnia. We use the best quality of materials that can be bought. Our factory is well equipped with improved machinery, and our workmen are skilled in the art of making fence in the best way. We employ men who know their business—the fence business. Many of them were farmers. The heads of our various departments have been in contact with farmers throughout all their business experience. They know the requirements of the farmer and understand what will best meet his needs.

Our fencing is built upon honor in a Canadian fence factory, sold direct to farmers

with a positive guarantee. Shipments made daily, fresh from our most improved fence machines, clean and bright. The capacity of our factory is the largest of any woven wire fence manufacturer in the Dominion. The experience and skill of the men behind the Sarnia Fence Company is second to none. We merit your confidence because our entire business is organized to meet your needs. Our wire is splendidly galvanized, is standard gauge, the best made anywhere. We caution you against alluring claims and prices along this line. Be sure that you get full gauge wire when buying fencing.

**We Sell Direct to Farmers**—By our Direct-from-Factory-to-Farm policy we have saved the farmers of Canada thousands of dollars. By our consistent low-price policy and the farmers' co-operation, we have brought down fence prices. We owe our entire success to the strong support of the farmers of Canada.

**Various Styles of Fencing**—We manufacture fencing suitable for all kinds of livestock, general farm purposes, poultry, garden and lawns; also gates and fencing supplies.

**Barb Wire, Too**—We can save farmers

money on barb wire fencing. Ours is full gauge No. 12 wire. Beware of the lighter gauge at supposedly low prices. Let us give you the facts about barb wire. Write us before you place your order.

**A Canadian Enterprise**—Ours is a Canadian business. Our

factory is located in Sarnia. Our Western headquarters is located in Winnipeg. We believe that Canadians should stand together. We could not expect your co-operation and support of our direct dealing plan if it were not to your advantage to buy your fencing that way.

**Order Now**—You will soon have "fence weather." Place your order early. Have your fencing in hand for use when an extra day comes along that you can do fencing. Buy the best. Save the repair money that you will surely lose if you buy cheaply-made fencing.

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**The Sarnia Fence Company Limited**

WINNIPEG, Manitoba

SARNIA, Ontario



**Only Two Profits**  
**--Yours and Ours**



government caucuses held so far this session, he has asserted that matters are going smoothly within the government camp, and that every thing points to the creation of a permanent party. It is known that at the caucus his week Mr. Mowat, of Parkdale, Toronto, strongly urged the framing of a party platform upon which all Unionists might agree to stand. In the Liberal camp there is an inclination to think that the move to create a Unionist party will succeed, but they add, "They won't all stick."

**Sam Hughes Roars**

Sir Sam Hughes afforded the house three hours of mild excitement on Tuesday, when he launched into a long tirade against the government, in which the former ex-minister of militia can now see no good. Sir Sam's opinion of Unionist was never very high, but it has apparently dropped down to the zero mark, and he appears to be longing for the days when it will be no more. Sam's restiveness is not due to the fact that he has any love for the opposition, he is too much of the old-fashioned Tory and party man to be suspected of that, but the ex-minister will never be pleased with any administration in which Sir Thomas White and some of his old colleagues of the Borden administration, with which he parted company, are prominent, not to speak of the Liberal Unionist ministers.

Sir Sam admitted that much as he dislikes the ministry he would have to put up with it for the present, because it would not do, in his opinion, to even think of a general election until all the fighting men are home. Then, he declared, a new parliament should be elected. He voiced the opinion, no doubt, of many Canadians, when he asserted that the government has assumed too much authority over things in general, and in so doing had departed from the ways of constitutional government. Much of this, he said, was quite unnecessary.

In criticising the overseas command on the score that Canadian lives were needlessly sacrificed in some of the fighting towards the close of the war, the general was voicing the discontent one hears from time to time from returned soldiers. Sir Sam was particularly vigorous in his condemnation of the sacrifice of lives in the taking of Mons, four hours before the cessation of hostilities, and declared that the officer responsible should be court-martialed. It must be admitted that doubt as to the necessity for the final action of the war has crossed the minds of many Canadians not of the fighting line, despite the glory attached to this historic event.

The decision of supporters of the government from west of the Great Lakes, to have frequent gatherings of their own to consider problems pertaining to the prairie provinces, and to British Columbia, has excited not a little interest this session. The western members dislike the name caucus being applied to their gatherings as that would indicate in the minds of some, a separate political organization, or what in political parlance is known as a "cave," or a group of members bent on achieving a fixed purpose or upsetting the party apple cart. "Caves" are sometimes very successful in achieving their purposes. The government supporters from the West declare, however, that there is no sinister design back of their action, just a desire to be in the best possible position to secure what is coming to the part of Canada they represent.

The only drawback in connection with the organization is that the British Columbia members do not always agree with those from the prairie provinces, but as one member put it, "when we cannot agree we can take a vote and the majority will rule."

**Hail Insurance Carried**

Edmonton, Alta., March 7.—Latest returns show that 46 municipal districts are favorable, and 38 are against the new Hail Insurance Oct. The majority of those districts that have not yet reported will go against the act, but since only 45 favorable districts are required, the Hail Insurance district is assured. Much credit is due to the United Farmers of Alberta, without whose splendid help the plan could not have been carried out in the short time left for the campaign on account of the influenza epidemic. The first general meeting to be held in Calgary, on March 19, will elect the new board of directors.

## Mammoth Peanuts

These are the early maturing. Their culture is simple and well understood. Mammoth Peanuts are the best for the home garden. They are very hardy and the plants are very bushy. The leaves are very green and the pods are very large. The seeds are very large and the oil is very rich. The plants are very hardy and the pods are very large. The seeds are very large and the oil is very rich.

## Shoe Fly Plant

A very remarkable plant. It is very hardy and the pods are very large. The seeds are very large and the oil is very rich. The plants are very hardy and the pods are very large. The seeds are very large and the oil is very rich.

## Japanese Climbing Cucumber

A very remarkable plant. It is very hardy and the pods are very large. The seeds are very large and the oil is very rich. The plants are very hardy and the pods are very large. The seeds are very large and the oil is very rich.

## Giant Butter Beans

A very remarkable plant. It is very hardy and the pods are very large. The seeds are very large and the oil is very rich. The plants are very hardy and the pods are very large. The seeds are very large and the oil is very rich.

## A Few Other Seed Novelties You Should Cultivate

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## Moore's Universal Assistant and Complete Mechanic

CONTAINS 1616 PAGES, 500 ILLUSTRATIONS, AND OVER 1,000,000 WORDS. FACTS, CALCULATIONS, RECIPES, FORMULAS, TRADE SECRETS, FOR EVERY BUSINESS!

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The following synopsis gives some idea of the value and scope of the work. The contents are as follows:

Part 1.—Bread, Cracker, Pastry and Cake Baking, Domestic Cooking, etc. Part 2.—For farmers, Horse Shoers, Stock Owners, Bee Keepers, etc. Part 3.—For Lumbermen, Carpenters, Builders, Contractors, Mill Owners, Shipbuilders, Ship Owners, Freighters, Navigators, Quartermen, Merchants and Business Men generally. Part 4.—Natural, Mechanical and Scientific Facts. Part 5.—For Dyers, Clothiers, Bleachers, Hatters, Furriers and Manufacturers. Part 6.—Medical Department for Druggists, Physicians, Dentists, Perfumers, Barbers and general Family Use. Part 7.—For Grocers, Tobacconists, Confectioners, Saloon Keepers, Syrup, Cordials, Ice Cream, Summer Drinks, Domestic Wines, Canned Goods, Soups, etc. Part 8.—For Farmers and Curriers, Hoot, Shoe, Harness and Rubber Manufacturers, Machine and Ivory Workers, Bookbinders, Anglers, Trappers, etc. Part 9.—For Painters, Decorators, Cabinet Makers, Piano and Organ Manufacturers, Polishers, Carvers, Gilders, Picture Frame and Art Dealers, China Decorators, Pottery, Glass Manufacturers, Glass Blowers and Gilders, Architects, Masons, Bricklayers, Plasterers, Stucco Workers, Kalsominers, Slaters, Roofers, etc. Part 10.—For Watchmakers, Jewelers, Gold and Silversmiths, Gilders, Burnishers, Colorers, Enamellers, Lapidaries, Diamond Cutters, Engravers, Die Sinkers, Stencil Cutters, Refiners, Sweepstakers, etc. Part 11.—For Engineers, Firemen, Engine Builders, Steam Fitters, Master Mechanics, Machinists, Blacksmiths, Cutlery, Locksmiths, Saw, Spring, and Safe Manufacturers, Iron and Brass Founders, Mill Owners, Miners, etc. Part 12.—For Art Workers, Bronzing, Dipping and Lacquering, Brass Finishers, Hardware Dealers, Plumbers, Gas Fitters, Timmer and Joiners etc. Part 13.—For Printers and Publishers, Gas Companies and Consumers, Gunsmiths, Contractors, Quartermen, Coal Dealers, Oil Manufacturers, Sugar Refiners, Paper Manufacturers, Cotton and Woolen Manufacturers, Cutlery, Needles and File Manufacturers, Metal Smelters, etc. etc. Part 14.—The Amenities of Life, Useful Advice. Part 15.—Tables, etc. Embracing Useful Calculations in every business.

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## CLEAN TESTED SEED GRAIN

MAKE CERTAIN OF YOUR SEED NOW! Good seed is the best investment you can make. Our new Catalog of farm seeds thoroughly cleaned, rigidly tested for germination, shipped subject to your approval. Investigate our three reliable brands. Now, different Catalog on request. Harris McFayden Seed Co., Limited. Farm Seed Specialists. WINNIPEG, MAN.

## POTATOES

If your potato crop was a failure last year, you will soon be buying some for seed and home use. Last spring, we sold thousands of bushels for this purpose, and advise that we can again this year, supply first-class stock in any quantity as soon as weather permits shipping. The market at present runs from 85 to 90 cents per bushel, f.o.b. Winnipeg.

Indications are that prices will be reasonable, and, although we cannot quote definitely at the present time, would suggest that you let us have your order on the basis of \$1.00 per bushel. If this price is a little above, we will apply balance to freight or refund you. We charge ten cents for every bag, and mail refund soon as bags are returned.

Canada Food Board License No. 7-107.

**GOLDEN STAR FRUIT AND PRODUCE CO.**

WINNIPEG MANITOBA

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IT would be folly indeed if a belief detrimental to the public welfare—and proven false—was allowed to last any longer. That false belief is that candy is a luxury.

Candy is food in one of its most useful and attractive forms.

All elements used in the composition of Candy are recognized useful foods.

Candy contains large quantities of sugar, some fats such as butter; also nuts, fruits, corn syrup, chocolate and flavoring.

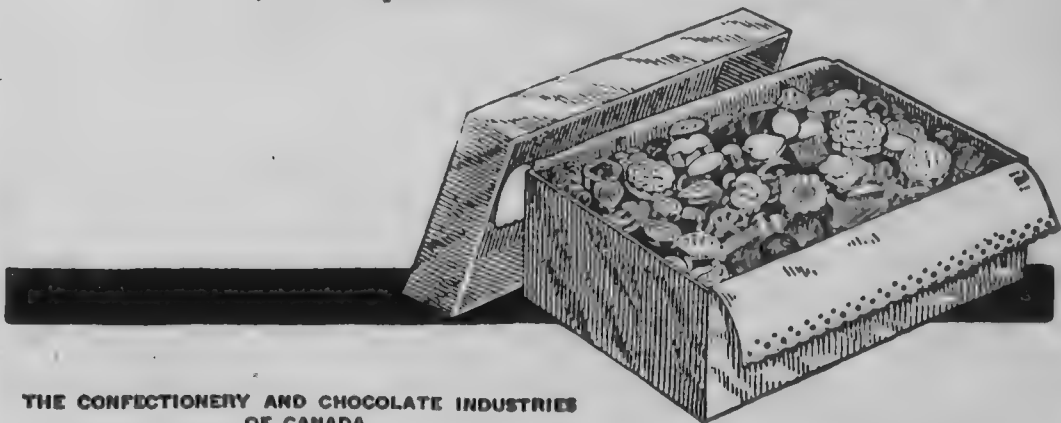
Combine these ingredients in proper proportions and you have a balanced ration—the high food value of which is recognized by all leading food and medical authorities.

Sugar supplies the bodily demand for fuel. Fruits and nuts produce essential nutriment; chocolate is a most nourishing fat food and delightful stimulant. The flavorings stimulate the digestive organs and increase the flow of saliva and gastric fluid.

Eat more candy!

Medical science has established its value as an energy-producing food.

Serve Candy as a Dessert.  
It is a Splendid Food.



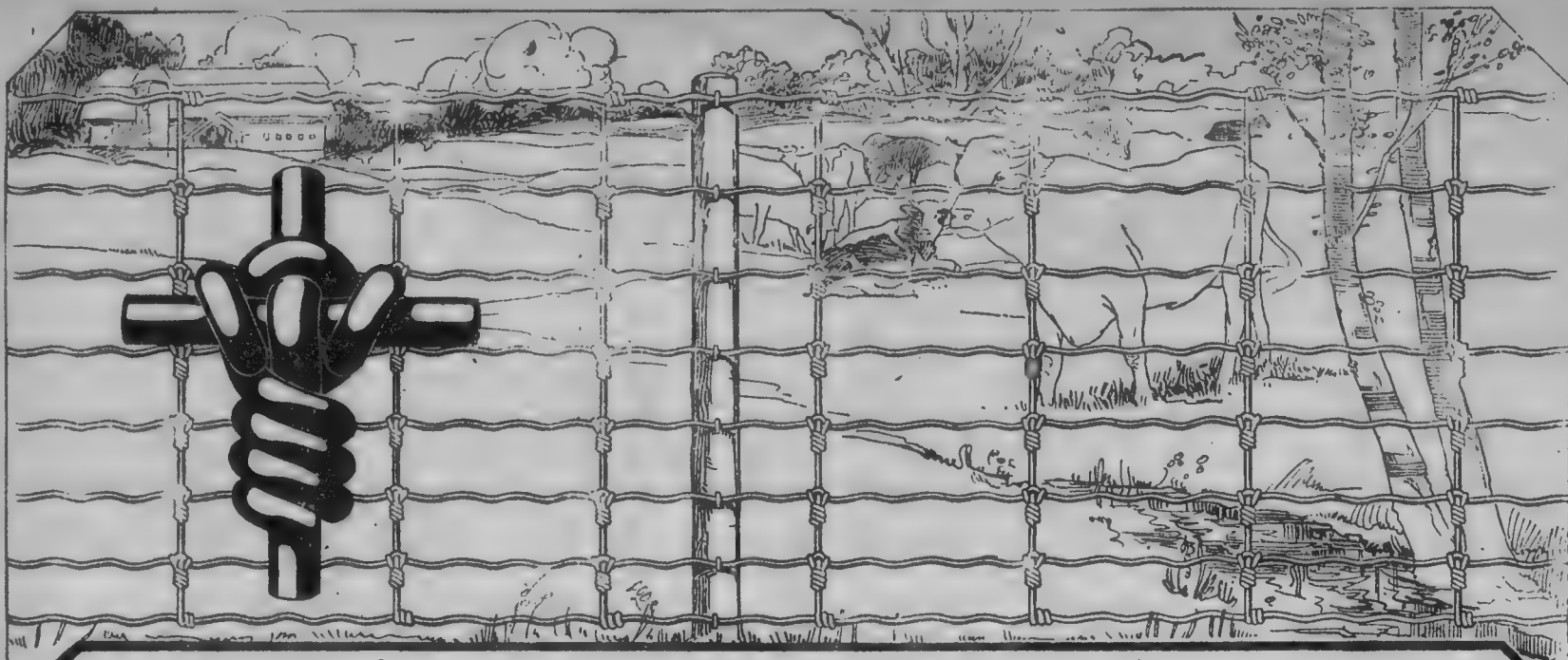
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11

**I.X.L. VACUUM WASHER**  
REDUCED TO Pre-War Price... **\$1.50**  
Washes anything, from fine lace to a horse blanket. Sent prepaid to your address. Order at once. UNITED MANUFACTURERS, 601 Building, Winnipeg.

**HOLSTEINS** A few young bulls from two months to 20 months of age, out of large, heavy producing cows with R.O.P. records from 18,000 pounds to 22,700 pounds of milk in 365 days. These bulls are sired by our famous herd headers: Duke/Wayne Mochthilde 2nd, 15748, and Sir Canary Pietje 2nd, 28040, whose dam has the average test of 4.4 per cent. b.f. Also several bulls out of heavy producing, untested cows. Entire herd free of Tuberculosis. Write for particulars to—  
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## Good Fence—an Essential

Good fence is considered in the light of a practical and profitable investment instead of a farm expenditure. No investment in farm necessity, conveniences or improvements can show up to quite as good advantage as that made in good fencing. You can get more for your dollar invested in wire fence just now than any other all-metal commodity.

Throughout the period of high-priced metal materials the price of fence did not reach the peak mark. Fences marketed throughout the 1918 season were purchased at the market prices prevailing in late 1917. The season in 1918 for the manufacturer to purchase material and produce fence was over at the time metal markets reached the peak, shortly prior to the ending of the war. The product of the fence factory which is now being marketed for the 1919 Spring season was purchased after metal market prices were adjusted to nearer peace-time basis. Fence stocks in the hands of the manufacturers and their distributors could not be replaced on today's market prices at one cent less than these stocks cost. There have been no market declines since the materials from which these stocks were made were purchased.

Fence prices did not reach the top notch, consequently

no further decline for the present can be expected. Material costs are practically the same as they were in late 1917. Labor and freight charges are one-quarter to one-half more. Your fence prices today are practically the same as in the United States, with the exception of the seven-and-a-half per cent. war tax.

After seeding, comes fencing. A damp day for seeding is often a good day for fence building. Order your fencing now and you will avoid delays later, when the time comes that you can use it.

The need for farm fencing is greater than ever before, but the need for care in selecting dependable fence is most important. The standard of quality maintained throughout the processes of manufacture is under our personal supervision. We draw and galvanize all of the wire in our finished products.

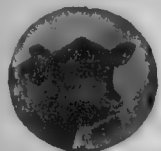
Frost Fence is dependable—presents an attractive appearance—and has a reputation for standing up under all reasonable conditions. Iron Posts, Galvanized Gates, Ornamental Fence and Gates to match, are other of our popular products with tidy farmers.

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**Frost Steel and Wire Co. Limited, Hamilton, Canada**



### AT DENVER AND BUFFALO



The Grand Champion Steer at the National Western Livestock Show was a California-bred Aberdeen-Angus that sold for the Western record price of 60 cents a pound. At the first commercial cattle show at the Buffalo stockyards a load of Aberdeen-Angus heifers were first and sold for the record price of 22 1/2 cents a pound. This makes the Aberdeen-Angus war record 35 OVER-ALL Grand Championship points in North America.

**Aberdeen-Angus for QUALITY Beef—ANYWHERE!**

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### ELM PARK ABERDEEN-ANGUS

I can sell you a Breeding Bull that sired most of our Show Calves in 1918. He is also a Show Bull for the three-year-old class. Also a two-year-old Show Bull that was Junior Champion at Toronto, 1917. Also Bulls and Females in good breeding condition.—JAMES BOWMAN, Elm Park, Guelph, Ont.

### We are Supplying Carloads of Seed Oats

at many points in Saskatchewan and Southern Alberta at prices ranging at about \$1.25 per bushel for strictly high-class Seed Oats, free from wild oats, with over 90 per cent. germination; also Seed Barley, free from wild oats.

WRITE US FOR FULL PARTICULARS

We want to buy one or two cars of Spring Rye, a quantity of Beardless Barley. Also Brome Grass Seed. Forward samples and quote prices.

**J. J. MURRAY & COMPANY**

Seed Merchants EDMONTON, Alberta.

A Postcard will get you our 1919 Catalogue on Seed and Grain.

### Northern Star Ranch

Pure-bred Suffolk Sheep, from Imported Ram. Both sexes, all ages. Also good Grade Sheep, Shorthorn Cattle and Berkshire Swine. Write me your wants.

LESTER LEVERS, CASTOR, ALTA.  
Phone 404. P.O. Box 283.

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We have 14 head of Big Eugged Pure-bred Stallion Colts, rising three years old, also a few older Stallions. Our horses are raised in the open and in bunches and mature into very useful horses. Our prices are very reasonable for high-class stock. Write us for Further Particulars.

LYNESS & DeLANEY, Fessenden, N. Dak.

### STALLIONS FOR SALE

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New Importation of High-class

**Clydesdales and Percherons**  
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Stable: 10129 98th Street, Edmonton.  
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### PERCHERON STALLIONS AND MARES FOR SALE

We are in a position to furnish dealers and breeders the kind they want. Sold 28 head to Canada in 1918.

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### TOWERS FISH BRAND REFLEX LONG COATS

"Takes the Wet Out of Rain."

**Fish Brand Reflex Long Coats**

THIS is a coat suitable for freight handlers, delivery men and all outside workers. Made of heavy material—double throughout, finished with corduroy lined collar—has inner cuffs in sleeves and inner breast piece. Made with the celebrated Reflex Edges, so that when the coat is buttoned, rain is prevented from running in at the front.



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Coast to Coast Service

**Dr. BELL'S** Veterinary Medical Wonder. 10,000 \$1.00 bottles to horsemen who give the Wonder a trial. Guaranteed for inflammation of lungs, bowels, kidneys, fevers, distempers, etc. Send 25 cents for mailing, packing, etc. Agents wanted. Write address plainly. Dr. Bell, V.M., Kingston, Ont.



# The Farmers' Market

**OATS**—Since a week ago the local market has been generally dull and narrow. The United States government delayed a few days ago in making any decision in regard to pork prices. Their price of \$17.50 was continued in the meantime, and it was expected that it would be maintained for the present month. On March 5, they announced that all restrictions on exports were cancelled, and that therefore, price restrictions would also be cancelled. However, this did not cause any break in prices of grains. Reports were coming in that the stocks of grain on the farms were very low and that the government report thereon to be issued on March 7, would be very bullish. This caused sharp advances in corn, and other coarse grains were influenced also. On March 7, Winnipeg May oats closed 3½ cents up from previous close, and 3½ cents up from the previous week.

**BARLEY**—There has been very little doing, and prices have advanced 2½ cents per bushel. Expectations of export business have not yet been realized. Ocean tonnage is still an uncertain problem.

**FLAX**—There have been substantial gains in prices during the week. Crushing interests have been good buyers of spot seed at premiums over May delivery prices. The Argentine strike continues and shippers from there are still held up. Reports today stated some large shipments had been made yesterday, and our prices eased off several cents. These reports were not confirmed and the market recovered from the break.

## WINNIPEG FUTURES

Oats	3	4	5	6	7	8	Week	Year
							ago	ago
May 68	69	69	69	69	72	70	69	66
July 67	63	63	63	63	71	69	63	65
Barley								
May 88	89	89	89	89	91	90	88	
July 88	89	89	89	89	90	89	88	
Flax								
May 331	334	338	343	343	341	329	393	
July 321	323	325	328	327	327	322	391	

## INTERIOR TERMINAL ELEVATOR STOCKS

Movement of grain in interior terminal elevators for the week ending Wednesday, March 5, was as follows:

Elevator	Grain	Rec'd during week	Ship'd during week	Now in store
Saskatoon	Wheat		10,771	486,245
"	Oats	27,667	35,120	1,046,851
"	Barley	4,113	1,408	123,219
"	Flax			1,176
Moose Jaw	Wheat		392	998,740
"	Oats	27,779	33,132	541,973
"	Barley	2,623		77,613
"	Flax			1,212
"	Rye		1,547	1,763
"	Corn			4,772

## THE CASH TRADE

Minneapolis, March 6, 1919.

**OATS**—Easy, with No. 3 whites 2 cents to 2½ cents under May; demand quiet. No. 3 white closed at 55½ cents to 57½ cents; No. 4 white oats at 52½ cents to 55½ cents.

**RYE**—Firm early, with No. 2 at 2½ cents discount under May, but eased to 3 cents under; demand less active. No. 2 rye closed at \$1.41 to \$1.41½.

**BARLEY**—Firm to 1 cent higher early; medium and low grades up in some cases, but advance lost. Prices closed at 80 cents to 92 cents.

**FLAXSEED**—Strong and 1 cent higher; No. 1 spot, 13 cents to 15 cents over Duluth May, with good demand. No. 1 seed closed at \$3.84½ to \$3.87½ on spot and \$3.82½ to \$3.84½ to arrive.

## The Livestock Market

### WINNIPEG

March 8, 1919.—United Grain Growers Limited Livestock Department, Union Stock Yards, St. Boniface, Man., reports receipts of livestock for sale at the Union Stock Yards St. Boniface, for the week ending Saturday, March 8, 1919: Cattle, 1,626; calves, 21; hogs, 4,502; sheep, 137.

The run during the past week has been a shade heavier, with a better percentage of real good beef stuff offering. There are not, however, very many good breeder stockers and feeders coming forward, and the good ones are quickly bought up. The prices on the poor ones are somewhat slow and draggy. The United States quarantine regulations are being rigidly enforced, and it is necessary at the present time for all stockers and feeders from Saskatchewan and Alberta, which are being shipped, to be accompanied by a Veterinary Inspector's certificate showing that the district in which stock originated is free from mange. We want to draw our shippers' attention very forcibly to this and ask them to obtain this certificate before shipping in order that the Southern buyers can bid on this stock. These certificates may be easily obtained in Saskatchewan by applying to Dr. M. Barker, Inspector in Charge, Regina, Sask., and in Alberta by applying to Dr. J. C. Hargrave, Inspector in Charge, Medicine Hat, Alta.

Select hogs still holding their own at \$17.25, but a rather serious situation has arisen in connection with "stock" hogs.

### FIXED WHEAT PRICES

	1*	2*	3*	4*	5*	6*	T1	T2	T3
Fixed Year ago	224	221	217	211	199	190	212	212	208
Year ago	221	218	215	209	194	185	215	212	207

### Cash Prices at Fort William and Port Arthur, Mar. 3 to Mar. 8 inclusive

Date	Wheat Feed	2CW	3CW	OATS Ex 1 Fd	1 Fd	2 Fd	3CW	4CW	Rej.	FLAX 1NW	2CW	3CW	RYE 2CW
Mar. 3	165	69	63	64	61	58	86	80	74	73	334	325	305
4	165	70	63	65	61	58	86	81	75	74	338	329	309
5	165	71	64	65	62	57	87	82	75	74	342	336	313
6	165	71	64	65	61	58	86	81	75	74	347	341	320
7	165	74	67	68	65	61	88	83	77	76	346	340	320
8	167	72	65	64	63	59	77	82	76	75	341	335	318
Week ago	165	80	63	64	61	57	85	80	74	73	334	325	305
Year ago	175	98	95	94	92	88	88	83	55	53	327	324	365

Owing to a rather serious outbreak of hog cholera no feeding hogs are allowed to be shipped a distance exceeding eight miles from these yards. This will, naturally, restrict the market for "lights" and we strongly advise our shippers to hold back this class of hogs until the embargo is lifted.

The following summary shows the prevailing prices at present:

Butcher Cattle		
Extra choice steers	\$13.00 to \$14.50	
Choice heavy steers	11.50 to 12.75	
Medium to good steers	10.00 to 11.25	
Fair to medium steers	9.00 to 9.75	
Common to fair steers	7.00 to 8.75	
Choice fat heifers	9.00 to 11.00	
Good to choice cows	8.00 to 9.50	
Fair to good cows	7.00 to 8.00	
Canner and cutter cows	4.50 to 6.00	
Best fat oxen	7.00 to 9.00	
Canner and cutter oxen	5.00 to 7.50	
Fat weighty bulls	7.00 to 8.25	
Holstein bulls	5.50 to 7.00	
Fat lambs	12.00 to 13.00	
Sheep	9.00 to 10.00	
Veal Calves	8.00 to 10.00	

Stockers and Feeders		
Choice weighty good colored		
Feeders	\$10.00 to \$11.00	
Common to good stockers	7.50 to 10.00	
and feeders	85.00 to 100.00	
Best milkers and springers	50.00 to 80.00	
Fair milkers and springers	50.00 to 80.00	

### Hogs

Selects fed and watered	\$17.25
Straight heavies	\$11.00 to 14.00
Light hogs	9.00 to 14.00
Sows	9.00 to 11.00
Stags	7.50 to 9.00
Boars	5.00 to 7.00

### CALGARY

March 7, 1919.—The United Grain Growers Limited report this week's livestock receipts as follows: Horses, 309; cattle, 1,818; hogs, 1,858; sheep, 61.

### Cattle

The cattle receipts were only moderate, but with a steady demand prices held up on all classes of good butcher cattle, the packers being the best buyers on good cows and heifers, with the speculators taking the bulk of the good steers. A few fat steers sold as high as \$14.50, with an occasional sale at 15 cents. For nine choice cows from R. R. Wood, of Carstairs, we obtained \$12.50. Common stuff was hard to sell. Few bulls were offered, and it took an exceptionally good animal to exceed 8 cents. Good stocker steers continue to sell around 10 cents, but the demand at this figure is not very brisk.

We anticipate a good, steady demand on classes of butcher cattle for the next two months or so, especially on good cows and heifers. The state of the stocker market will largely depend on the final decision in regard to the dipping regulations, but if these are very rigidly placed it will have a depressing effect here, co-operative shipments can be handled to good advantage as there is ample accommodation at the yards.

Choice fat steers	\$13.00 to \$14.50
Medium to good steers	12.00 to 13.00
Common butcher steers	10.00 to 12.00
Fat heavy heifers	11.00 to 12.00
Fat cows	10.00 to 11.00
Medium cows	8.00 to 9.00
Common cows	6.50 to 7.50
Canner and cutter cows	4.00 to 6.00
Good bulls	6.00 to 8.00
Good stocker steers	9.50 to 10.50
Good two-year-old heifers	7.50 to 8.50
Yearling heifers	7.50 to 8.50
Good veal calves	9.00 to 11.00
Stocker calves	35.00 to 40.00

### Hogs

The hog receipts were more liberal than last week and the competition was keen, our early week's hogs up to Thursday, all sold at \$17.90, and Friday's hogs brought \$18.00.

### Sheep

Fat sheep are scarce, but good fat lambs

would sell up to 14 cents. Ewes 10 to 11 cents, wethers 12 to 13 cents.

### ST. PAUL

March 6, 1919.

**CATTLE**—Trade was steady to weak, with some classes getting lower bids today. A few steers sold at \$14.00 to \$16.25. Cows and heifers have lost some of the strength shown at the start of the week. Cutter and canner values were lower, with sales reported between \$5.25 and \$6.25 largely. Bulls were steady. Stockers and feeders had a slow start with rates barely steady. Veal calves were unchanged, going mainly between \$7.00 and \$10.25. Good springers were salable at steady rates, but nobody wanted milkers, the latter going over the scales.

**HOGS**—Hogs opened steady at yesterday's advance of 35 cents to 45 cents on mixed droves. Top was \$17.65, with bulk at \$17.50 to \$17.60, with low end at \$17.40. Stock pigs and light hogs were 25 cents to 50 cents higher, with sales at \$15.00 to \$15.75 mostly. The market is now 50 cents to 60 cents higher for the week. It was officially announced that the government order, fixing a minimum on hog prices, had been removed. Receipts were 3,600.

**SHEEP**—There was little doing at the sheep-house early with sales including small lots of inferior kinds only. Several good decks of fed lambs were scheduled to bring the nominal top of \$18.00 to \$18.50 or higher. Seconds and heavies are quoted at \$12.00 to \$16.50. Sheep were steady with best ewes at \$12.00 and culls down to \$5.00. Bucks sold at \$8.00 to \$9.00. Receipts were 1,700.

### CHICAGO

March 6.—(United States Bureau of Markets)—Hog receipts, 22,000; opened 10 cents to 15 cents lower, but strengthening and now about 5 cents to 10 cents lower than yesterday's best time; bulk sales, \$18.15 to \$18.35; butchers, \$18.25 to \$18.50; light, \$17.75 to \$18.25; packing, \$17.25 to \$18.15; throw outs, \$16.75 to \$17.25; pigs, good to choice, \$15.25 to \$17.25. Cattle receipts, 10,000; opening very slow; first sales of good and choice beef and butcher cattle steady to strong, others weaker; calves steady; beef cattle, good, choice and prime, \$16.50 to \$20.00; common and medium, \$10.50 to \$16.50; butcher stock cows and heifers, \$7.35 to \$15.50; canners and cutters, \$5.75 to \$7.35; stockers and feeders, good, choice and price, \$11.15 to \$14.75; inferior, common and medium, \$8.00 to \$11.15; veal calves, good to choice, \$17.50 to \$18.00. Sheep, 12,000; market opening slow; early sales steady; lambs, choice and prime, \$19.60 to \$19.75; medium and good, \$18.25 to \$19.60; culls, \$15.25 to \$16.75; ewes, choice and prime, \$13.50 to \$14.00; medium and good, \$11.00 to \$13.50; culls, \$6.00 to \$9.00.

### POULTRY AND EGGS

Winnipeg, March 8, 1919.

**LIVE POULTRY**—Produce firms want live poultry at strong prices, as follows: Old hens, per lb. 25c to 30c; Ducks, per lb. 30c; Geese, per lb. 25c; Turkeys, per lb. 27c to 28c; Old roosters, per lb. 20c.

**EGGS**—On account of the cold snap, fresh eggs were scarce and more Southern eggs had to be brought in to supply the demand. Eggs advanced 13 cents to 14 cents, bringing 57 cents wholesale and 65 cents retail.

### EDMONTON

The United Grain Growers Limited report this week's receipts as follows: Cattle, 530; hogs, 931; sheep, 194. Owing to the continued cold spell receipts were again light this week with a slow market. Prices held same as previous week.

Heavy export steers	\$13.00 to \$14.00
Choice fat steers	11.00 to 13.00
Good butcher steers	10.00 to 11.00
Medium and stocker steers	9.00 to 10.00
Choice cows and heifers	8.50 to 9.50
Good butcher cows	7.00 to 8.50
Medium and stocker cows	5.00 to 7.00
Canner and cutters	4.00 to 5.50
Bulls	5.00 to 7.00
Oxen	5.00 to 8.00
Veal calves	8.00 to 10.00

### Hogs

Very few hogs on the market with a good demand. Earlier receipts brought \$17.50 off cars, while Friday's hogs sold at \$17.75.

### Sheep

Sheep prices remain same as previous week.

## Wheat Prices to Fall

Continued from Page 65

world market dictates. That the loss will be considerable is not disputed or even argued over here. The Canadian West, therefore, approaches the spring season with this prospect; that next year's crop in all probability will be free from control so far as distribution is concerned, and that the world's price value of wheat will be much lower than it is now. If Central Europe and Russia reach any sort of stable condition before next autumn, the price value of Canadian and American wheat abroad will, doubtless, be higher; but who is going to pay for grain shipped into Russia?



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Does all kinds of belt work, too. Will run separator, corn sheller, feed grinder, or do any kind of belt work. It is an all-year-round tractor; gives economical and efficient service Spring, Summer, Autumn and Winter.

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## NOTICE

The Hudson's Bay Company is prepared to receive applications to lease lands, for hay and grazing purposes. Hay permits for one season may also be obtained. For particulars apply—

**LAND COMMISSIONER,**  
Hudson's Bay Company, Winnipeg.



# CO-OPERATION

## *Its Relation to the Organization of Canadian National Railways and in All Plans for Future Development in Canada*

A new national characteristic is developing in Canada. As yet it has not been crystallized into any set, formal expression. But it is best understood by the word, "co-operation."

Not that all progressive individuals all over the wide world have not been co-operating in the past! They had to if they were to exist. But the tendency appears to be now that co-operation shall be consciously, intelligently advanced as the best method of progress for the individual, the industry, and the nation as a whole.

During recent months there has been one great development of the co-operative idea in the merging, for the purposes of most efficient administration, of the lines of the Canadian Northern, Intercolonial, National Transcontinental, and Prince Edward Island Railways, under one board of directors of Canadian National Railways. The dominant consideration was the best interests of Canada as a whole. Whatever obstacles impeded the plan were overcome, and the big unit, comprehending some 14,000 miles of railway—35 per cent. of the total operated mileage of the Dominion—became an established factor.

Is it not a sign of the times, also, that the 40,000 employees of Canadian National Railways are pulling strongly together, that the great transportation agency they serve shall do its best work in the interest of the country as a whole?

Today, in Canada, no great industry—not even agriculture or transportation—is entirely self-contained. Agriculture, especially in the West, depends largely upon the wants of wheatless millions in other countries throughout the world. The needs of Canada in itself would not provide any great prosperity to the army of workers on the soil. So with the lumbering industry and that of mining, and fisheries; so also with the manufacturing industries throughout the country.

It is the money derived from the sale of the excess products that keeps each industry in motion. Transportation nourishes, and depends upon them all. Each Canadian worker depends upon some other Canadian, or some one in some other country to

make his working and his living possible.

In Britain, before the days of the railway, the populations were established in cities, towns, and villages, while the rural sections of the country were peopled to an extent that would be considered dense in Canada. Excellent highways had been built and the waterways served to handle the greater part of the goods the roads could not carry. When the railways were built, it was simply a matter of extra speed, the business being there ready to be moved.

In Canada, this is not the case. In this country the railway has a two-fold function to perform. The first is to open to development the natural resources of the country in order that labor may be successfully employed thereon. The second is to move expeditiously and economically, the products resulting from such combination of labor and resource. It opens the way to opportunity for others, and makes possible the sale to others of the products produced. It also makes possible its own position in the community. In a country 3,000 miles from ocean to ocean, the business of conveying the products of the farms, the woods, mines and manufacturing plants to market in Canada, or to ports for export, transportation must necessarily play a most important role.

In the days before Jacques Cartier, the country was as big as it is now. It had the same wonderful wealth of natural resources, the same potentialities of production, the same amazing water powers, and the same waterways.

But the Canada of the days of Cartier and of those others who succeeded Cartier, was the Canada when the native Indian paddled and roamed at will over great areas, fought his tribal wars, hunted among great herds of buffalo and other game.

What of Canada today? Vast areas of land return each year a variety of products that spell prosperity for a large section of the population. Thousands of men are engaged in the forests, and in the mines, and in the fisheries on both oceans, and on the inland waterways. Many other thousands are engaged in the manufacturing industries

throughout the country, other thousands again in professional pursuits, and in the business of marketing the products required by Canadians in all parts of Canada. Railways, and those employed by them, handle the products of the nation wherever business requires that they be transported from day to day.

One picture is of dormant wealth. The other illustrates the activities of busy millions. The second could not have been unless the railway had opened the great fertile areas, the mineralized zones, and the timbered regions to development. The railway then, represents a great portion of the difference between the two conditions pictured. What will it do for the future?

The greater portion of the mileage comprised within the Canadian National Railways was constructed with the primary object of developing, first, the sections of the country through which the rails were laid, and consequently the Dominion as a whole because of the expansion of these parts. Then came the war with its attendant disturbance of normal progression. Once the restraints of war which retarded the settlement of the areas served—which had been proceeding on a large scale—are removed, there is every reason to expect that this developmental work is to be renewed. The great feature of the immediate future will be the settling and the expansion in production from the territories served by the lines comprised within the Canadian National Railways.

The transcontinental lines of the Canadian National Railways have been constructed to a standard that will make possible a vast expansion of the services by rail without the necessity of great expenditures for reconstruction. Upon their lines the power of the locomotive can be used with efficiency that can hardly be equalled by any other system of similar importance in the world. They serve every ocean port of any consequence in Canada with the exception of one in northern British Columbia, and every commercial and industrial centre, save two or three in the western Ontario peninsula, and one or two in western Canada. They serve the important established mining districts, and a considerable portion of the, as yet unexploited, areas where minerals are almost certain to be found—where at least ex-

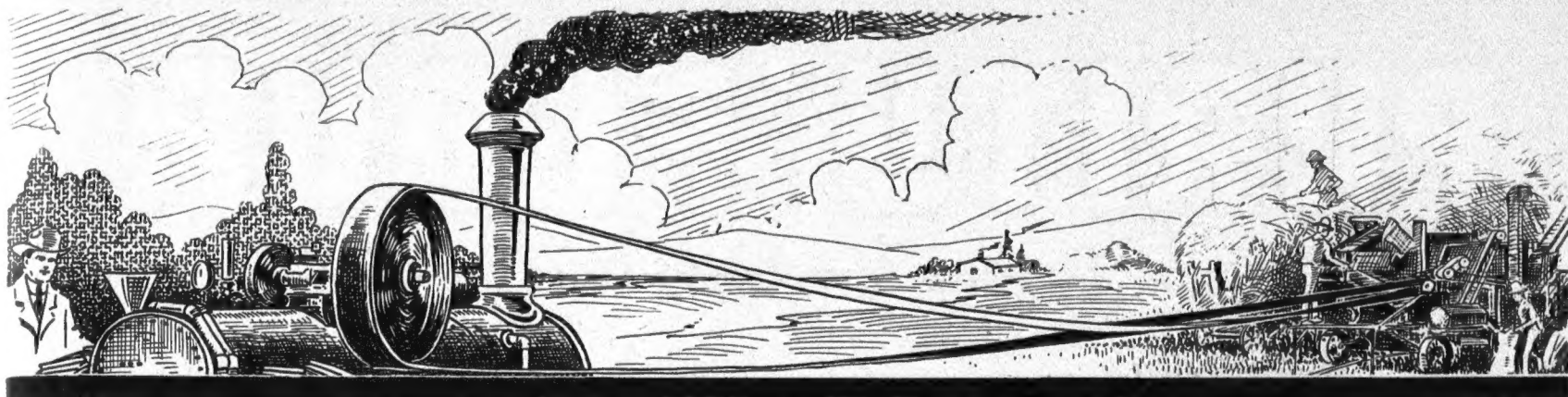
ploration to a limited extent has already resulted in rich finds being made in gold and copper, and other economic deposits. They serve the great new north in the West, and the great new north in the East, where the developments of the future will take place. Water powers, at present unexploited, exist in abundance on the waterways served by the various lines throughout the Dominion. All conditions therefore prevail for the building up of a great new traffic to the lines of the Canadian National Railways, enhancing thereby the prosperity of the people of Canada at large.

To meet the obligations resulting from war-time activities, Canadians must increase to a very considerable extent, the production from the natural resources with which the Dominion has been so generously endowed. This expansion must be on the farm, in manufactures, in the forests, the mines, and on the waterways. And the plans of the leaders in Canada include as well a development of the country's foreign trade, as well as expansion within the Dominion itself. Foreign trade implies drawing upon the great reservoirs of the country's resources in order that the manufacturers in the country may produce at higher speed. It also implies that these natural resources shall be handled economically and expeditiously to the industries where they are to be transformed into finished products to meet market conditions in other parts of the world. And also adequate steamship tonnage to convey the finished products from the ports of Canada to the other lands where the new market has been found. These facts furnish proof that the prosperity of the future in Canada will have as its foundation the public services of the Canadian National Railways, and the complementary ocean transport services of the Canadian government merchant marine, the vessels for which are now being built.

The system has within itself the germs of expansion which the Board of Directors will make it their special work to see developed. To this end it is being organized in order that the expected development and settlement along its lines shall be facilitated, and also that the system will be an efficient servant when the actual expansion has taken place.

Realizing the significance of developments in the past, and the important position the road will occupy in all plans for the future in Canada, the Board of Directors and the managing heads of the Canadian National Railways are facing their problems with open eyes and open minds. Making a success of what seems to have been a failure in other countries—government ownership of railways—is the ideal that has been set, and no effort will be spared to make that ideal a reality in Canada.





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